

For discussion
on 6 December 2000

PWSC(2000-01)71

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

**Head 711 - Housing
Territory Development
Transport - Roads**

**652TH - Noise mitigation measures for Housing Sites No. 6 and 10 at West
Kowloon Reclamation**

Members are invited to recommend to Finance Committee the upgrading of **652TH** to Category A at an estimated cost of \$219.2 million in money-of-the-day prices.

PROBLEM

We need to provide noise mitigation measures along a section of the Lantau & Airport Railway (LAR) for Housing Sites No. 6 and 10 in the northern part of West Kowloon Reclamation (WKR).

PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Housing, proposes to upgrade **652TH** to Category A at an estimated cost of \$219.2 million in money-of-the-day (MOD) prices for the provision of noise mitigation measures along a section of the LAR for Housing Sites No. 6 and 10 in the northern part of WKR.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of **652TH** comprises the construction of -
 - (a) 1 200 metres of 11-metre high semi-enclosed noise barriers and 900 metres of 3-metre high cantilever noise barriers alongside a section of the LAR tracks adjacent to Housing Sites No. 6 and 10 at WKR; and
 - (b) associated drainage works.

Details of the proposed works are shown at Enclosure 1. We plan to commence construction in March 2001 for completion in March 2003.

JUSTIFICATION

4. A study on the "Review of Land Use in the Northern Part of WKR" was carried out in December 1997. The study recommended that Sites No. 6 and 10 in the northern part of WKR, which were originally zoned for industrial use, could be used for residential development. In this event, the study confirmed the need for noise barriers along the section of LAR tracks fronting these housing sites in order to protect the sites from excessive noise generated by the LAR.

5. The rezoning of Sites No. 6 and 10 from industrial to residential use was gazetted in April 1998 and was subsequently approved under the Town Planning Ordinance. The Town Planning Board imposed a condition that the above noise barriers should be in place before the population intake at the housing sites. The Director of Housing plans to develop the two housing sites to provide 8 300 public housing flats for accommodating some 28 000 persons. The first population intake is scheduled in 2003 for Site No. 10 and in 2007 for Site No. 6.

6. In the absence of the proposed noise barriers, some 2 240 flats would be exposed to railway noise at levels in excess of the limits stipulated under the Noise Control Ordinance. The proposed noise barriers will reduce the rail noise impact at the housing sites from the present 71dB(A) to within the night time limit of 60dB(A).

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7. The proposed noise barriers fall within the site boundary of the LAR. MTRCL will start to lay two extra dedicated tracks for the Tung Chung Line (TCL) of the LAR in March 2001 for completion in December 2003, so that the operation of the TCL will tie in with the commissioning of the Nam Cheong Station of West Rail.

8. As the proposed noise barriers fall within the LAR site, they will need to be constructed concurrently with the MTRCL's track laying works. If this opportunity is missed, it will be practically impossible to construct the noise barriers after the TCL is in operation. We therefore plan to entrust the proposed works described in paragraph 3 above to MTRCL. We will reimburse MTRCL with the actual construction cost of the entrusted works plus on-costs.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be \$219.2 million in MOD prices (see paragraph 10 below), made up as follows –

	\$ million	
(a) Semi-enclosed noise barrier	137.3	
(b) Cantilever noise barrier	23.8	
(c) Associated drainage works	5.4	
(d) On-cost payable to MTRCL at the construction stage ¹	22.5	
(e) Contingencies	18.9	
	<hr/>	
Sub-total	207.9	(in September 2000 prices)
(f) Provision for price adjustment	11.3	
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Total	219.2	(in MOD prices)
	<hr/>	

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¹ We will pay on-costs for the design, construction supervision and insurance costs related to the entrusted works. We estimate these will represent 16.5% of the project construction cost (i.e. \$27.5 million). \$5 million payable to MTRCL for detailed design work will be charged to the block allocation **B100HX** "Minor housing development related works, studies and investigations for items in Category D of the Public Works Programme". Subject to upgrading of **652TH** to Category A, the remaining on-cost which is estimated to be some \$22.5 million will be payable to MTRCL at the construction stage.

10. Subject to approval, we will phase the expenditure as follows –

Year	\$ million (Sept 2000)	Price adjustment factor	\$ million (MOD)
2001 - 2002	60.0	1.02550	61.5
2002 - 2003	110.0	1.05627	116.2
2003 - 2004	30.0	1.08795	32.6
2004 - 2005	7.9	1.12059	8.9
	207.9		219.2

11. We have derived the MOD estimate on the basis of the Government's latest forecast of trend labour and construction prices for the period from 2001 to 2005. MTRCL will tender the proposed works as part of the contract for the TCL.

12. We estimate the annually recurrent expenditure arising from this project to be \$643,000.

PUBLIC CONSULTATION

13. We consulted the Sham Shui Po District Council on 5 October 2000. Members supported the proposed works.

14. On 6 November 2000, we consulted the Legislative Council Panel on Housing on the proposed works. Members asked for a comparison between the noise impact on the housing sites arising from the existing rail operation and the future impact when the two additional dedicated tracks for the TCL are in place. We explained to Members that, at present, the proposed housing sites are exposed to a maximum noise level of 68dB(A) from the two existing LAR tracks. The two extra dedicated tracks will provide for more frequent train services. In this event, the maximum noise level is likely to increase by 3dB(A) to 71dB(A). The existing and the projected noise levels are both higher than the statutory night time noise limit of 60dB(A).

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15. Members also questioned whether MTRCL should be responsible for the erection and maintenance of the proposed barrier. We explained that MTRCL's obligation with regard to the provision of noise barriers along the LAR was agreed at the time of finalising the Financial Agreement for the Airport Railway in the early 1990s. Briefly, the Corporation would be responsible for providing, at its own cost, necessary noise barriers at new tracks close to existing housing developments or identified developments under planning at the time. The provision of noise barriers at housing developments not so identified would be the responsibility of the Government or the relevant developers. Meanwhile, as the requirement for barriers emanates from the change in land use, MTRCL has no statutory obligation to provide the barriers in this case.

16. In addition, Members asked whether the Government might be open to further liability in relation to future noise barriers alongside the LAR. We have examined the planned land use of sites adjoining the railway. The section from West Kowloon to Kwai Tsing covers 40 major sites, but only two of these, namely the subject Sites No. 6 and 10 at WKR, will require the provision of noise barriers by the Government. An additional site involving an MTRCL housing development will require a noise barrier, but the costs of construction and maintenance in this case will be met by MTRCL as the project developer [PWSC(2000-01)70 refers]. For the section of the LAR in North Lantau, we plan to form some ten housing sites by reclamation adjoining the rail tracks. A location plan showing these housing sites is at Enclosure 2. Under the Airport Railway Agreement, MTRCL is obliged to provide four rows of track-side noise barriers covering five sites at Tai Ho. However, as the scope of the developments and housing mix for all ten sites have yet to be decided, the total requirement for the number and design of noise barriers has yet to be finalised.

ENVIRONMENTAL IMPLICATIONS

17. A noise assessment study completed in 1999 for Housing Site Nos. 6 and 10 at WKR concluded that the proposed noise barriers would be able to protect the housing sites from noise generated by the LAR and to comply with the Noise Control Ordinance. The project will not cause any long term environmental impact. The short term environmental impacts due to construction activities would be minimal, as existing sensitive receivers are far away and population intake of Sites No. 6 and 10 will not take place before completion of the noise barriers. Notwithstanding this, we will implement suitable environmental mitigation measures such as the use of silenced plant and noise screening, and frequent cleaning and watering of the site during the construction stage to avoid any adverse impact to the environment in the vicinity.

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18. We have considered in the planning and design stages ways of minimizing the generation of construction and demolition (C&D) material by giving due consideration on the foundation design of the noise barriers. We estimate that about 7 000 cubic metres (m³) of C&D material will be generated by the project. Of these, about 2 000 m³ (29%) will be reused on site, 5 000 m³ (71%) of inert C&D material will be reused as fill in public filling areas², and no C&D waste will be generated. We shall require the contractor to reuse the excavated material on site as filling material as far as possible to minimize the disposal of public fill to public filling areas. To further minimize the generation of C&D material, we shall require the contractor not to use hardwood for site hoarding, falsework or shoring of excavation, but to use metal in all components of site hoarding and sign boards. We shall control the disposal of public fill at public filling areas through a trip-ticket system and record the disposal, reuse and recycling of C&D material for monitoring purposes.

LAND ACQUISITION

19. The proposed works do not require any land acquisition.

BACKGROUND INFORMATION

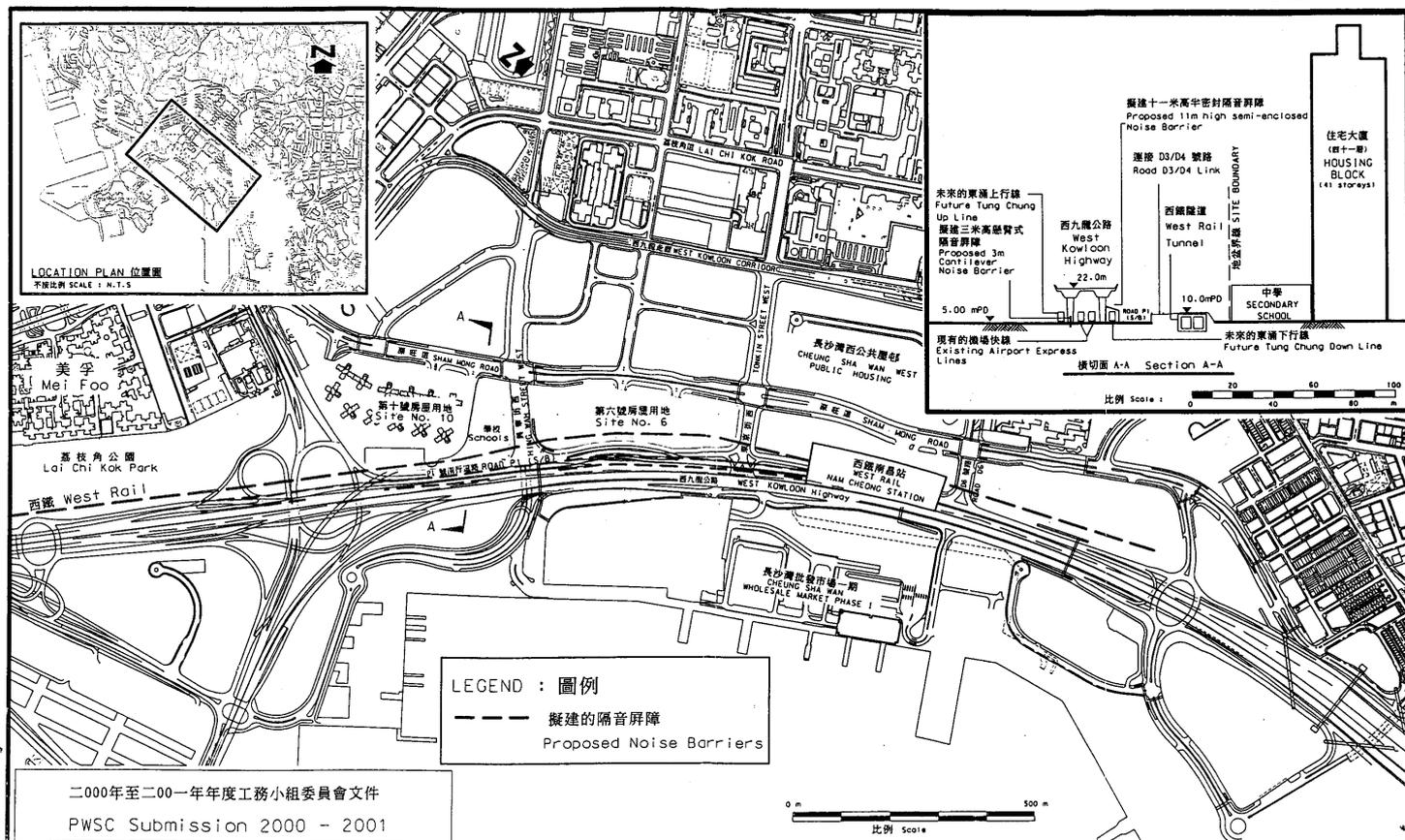
20. We upgraded **652TH** to Category B in September 2000.

21. The detailed design and tender documents for the proposed works have been completed. Construction works will commence in March 2001 for completion in March 2003.

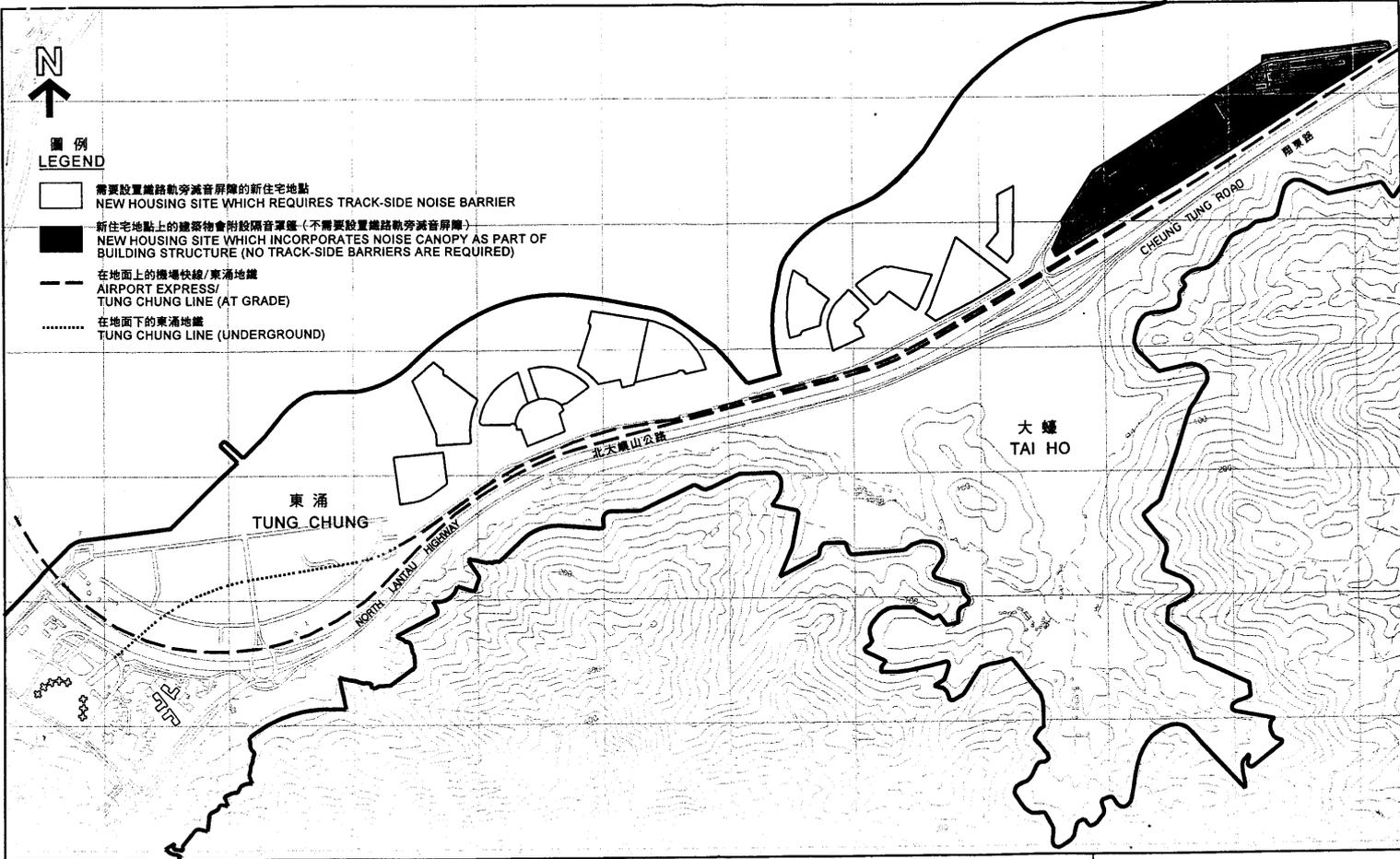
22. We estimate that the project will create some 200 jobs comprising 35 professional/technical staff and 165 labourers, totalling 4 321 man-months.

Housing Bureau
November 2000

² A public filling area is a designated part of a development project that accepts public fill for reclamation purposes. Disposal of public fill in a public filling area requires a licence issued by the Director of Civil Engineering.



圖則名稱 drawing title 西九龍填海區第6及第10號房屋用地的消減噪音設施 Noise mitigation measures for Housing Sites No.6 & 10 at West Kowloon Reclamation	繪圖 drawn C.F. NG	簽署 initial signed	日期 date 23.10.2000	項目編號 item no. 652TH	辦事處 office 九龍拓展處 KOWLOON DEVELOPMENT OFFICE 拓展署 TERRITORY DEVELOPMENT DEPARTMENT
	核對 checked F.S. SIT	簽署 initial signed	日期 date 25.10.2000	比例 Scale As Shown	
	核准 approved Mrs Christina Kwong	簽署 initial signed	日期 date 27.10.2000	圖則編號 drawing no. K 138	



東涌及大蠔受鐵路噪音影響的新住宅地點
NEW HOUSING SITES AFFECTED BY RAIL NOISE AT TUNG CHUNG AND TAI HO

VERSION F
DATE: 23.11.2000

SCALE 1:14,000
METRES 0 20 40 60 80 METRES

M/LI 00/104

附件 二
ENCLOSURE 2