

立法會
Legislative Council

LC Paper No. CB(1)309/02-03

Ref : CB1/PL/TP

Panel on Transport

**Background Brief on the Project -
"Widening of Tolo Highway"**

This paper provides background information on the project "Widening of Tolo Highway". It also sets out the existing policy for mitigating traffic noise and provides background information on the effectiveness of noise barriers.

Widening of Tolo Highway

2. The Tolo Highway is a strategic road link serving the Northeast New Territories and cross boundary traffic. According to the Administration, the section of Tolo Highway between Tai Po and Sha Tin would be unable to cope with future traffic demand. In November 1998, the Administration upgraded 561TH - "Widening of Tolo Highway between Island House Interchange and Ma Liu Shui Interchange" to Category A at an estimated cost of \$2,507.2 million in money-of-the-day (MOD) prices for the widening of this road section from dual three-lane to dual four-lane. The construction of this project commenced in March 1999. The relevant Public Works Subcommittee (PWSC) paper and extract of minutes of meeting are in **Annexes I and II**.

3. According to the Quarterly Report on the Public Works Programme provided by the Administration to the PWSC in September 2002, the bridge widening works, road and drainage works and noise barrier construction of the widening project are in progress. Overall work done is 74% completed. However, the project completion date has been deferred from December 2001 to February 2003. The delay is caused by the unsatisfactory performance of the contractor.

4. Regarding project estimate, it has been revised from \$2507.2 million to \$873.77 million. The project cost is reduced due to :

- (a) lower tender price of the construction contract;

- (b) reduction in quantities of works after remeasurement and that due to actual ground conditions;
- (c) deletion of noise barriers for Pak Shek Kok development area;
- (d) lower contract sum for closed circuit television works; and
- (e) deflationary trend.

5. For the widening of the remaining section of Tolo Highway, the Administration is pursuing the project together with the widening of Fanling Highway between Island House Interchange and Fanling as a separate public works item. The detailed design and ground investigation works are in progress.

Views expressed by Tai Po District Council

6. The Tai Po District Council (TPDC) held a series of meetings to monitor the widening works of the Tolo Highway. The major concerns expressed by TPDC are summarized below:

(a) Implementation timetable

7. TPDC was concerned about the delay in the delivery of the project and the resulting congestion.

8. The Administration had advised that the project completion date was delayed to February 2003 because of the unsatisfactory performance of the contractor. After repeated warnings by the Engineer, the contractor had taken remedial measures and the progress of works had improved. The adverse weather also affected the progress of the works.

(b) Temporary traffic arrangements and control

9. TPDC was concerned about the potential hazard to the safety of all road users during construction, particularly the confusion caused by the painting of temporary road markings vis-à-vis the existing markings, and the provision of lighting facilities.

10. The Administration had advised that the works were properly lighted, signed and guarded in accordance with the Code of Practice for the Lighting, Signing and Guarding of Road Works. The temporary traffic arrangements had also been examined by the relevant authorities and complied with the requirements stipulated in the Transport Planning and Design Manual. Regular review sessions had been conducted and improvement measures introduced.

(c) *Design of noise barriers on the highway*

11. TPDC had expressed concern about the design of noise barriers on the highway and the need for providing noise barriers on some sections of the highway.

12. The Administration had advised that as a result of the proposed improvement works and the expected increase in traffic flow, the residents alongside the highway would be exposed to noise levels exceeding the current environmental standard. Noise barriers in the form of vertical panels or curved partial enclosures would be constructed along the improved highway to mitigate the noise impacts. These barriers had been designed to a colour scheme.

13. The Administration had advised that the choice of colours constituted part of the design of noise barriers. Generally speaking, it was determined by two major factors: first, going with the surroundings to blend the noise barriers into the background; and second, highlighting the features in the design of the noise barriers.

14. As to the use of materials for noise barriers, the Administration said that while transparent materials could reduce the impact of these barriers on the landscape as well as drivers, they would produce the effect of bouncing off noise from their surface. Hence, these materials might not be suitable for noise barriers to be erected along roads with noise-sensitive buildings on both sides. The Administration therefore decided to make use of sound-absorbing materials, which were however invariably opaque.

(d) *Emergency openings at the central divider*

15. TPDC was concerned about the provision of emergency openings at the central divider where noise barriers were being erected.

16. The Administration advised that a total of 37 emergency doors had been added to the noise barriers erected along the central divider and the roadside of Tolo Highway. In addition, two emergency openings had been provided at the central divider for emergency use.

Existing policy for mitigating traffic noise

New roads

17. Under existing policy, when planning new roads, the relevant department or developer must ensure that traffic noise will stay below the noise

limit of 70 dB(A). If it is envisaged that traffic noise generated will exceed the noise limit, they must adopt all practicable direct measures such as adjusting the alignment and erecting barriers or enclosures to reduce the impact on residents in the neighbourhood. Where direct measures are inadequate, indirect technical remedies in the form of good quality window and air-conditioning should be provided to the affected residents. Such direct and indirect measures are however not applicable to existing roads that have been constructed before the current policy on new roads took effect.

Existing roads

18. In December 2000, the Administration announced a new policy to address traffic noise on existing roads. 29 existing roads (including 6 flyovers) were identified for retrofitting. It was estimated that 24 000 residential units would benefit from the retrofitting programme with the majority experiencing reduction in noise to below the noise limit. Besides, 72 roads were identified as candidates for resurfacing with low noise surfacing material. The Transport Department and the Environmental Protection Department are also examining the feasibility of implementing night-time traffic management measures at selected locations with a view to alleviating traffic noise impact on residents nearby. A background brief on Measures to address noise impact on existing roads was issued under LC Paper No. CB(1) 770/01-02(01).

19. To ensure that individual vehicles do not produce excessive noise, the Administration has also introduced legislation to keep Hong Kong's noise emission standards of motor vehicles in line with the latest standards recognized internationally.

Effectiveness of engineering and non-engineering solutions

20. According to an information paper provided by the Administration in February 2001, the noise reduction effects of various engineering and non-engineering solutions are illustrated as follows -

Engineering measures

Measures	Noise reduction	Remarks
Straight barrier	Up to 5 dB(A)	Effect depends on relative position of residents to the barrier/enclosure
Canti-lever barrier/ semi-enclosure	Up to 15 dB(A)	
Enclosure	Up to 25 dB(A)	
Change road alignment	Eliminate traffic noise that would otherwise be generated by the original road	
Tunnelling	Eliminate impact on residents locating along the alignment	

Low noise surface material	<ul style="list-style-type: none"> • Up to 5 dB(A) on high speed road • Up to 3 dB(A) on low speed road 	
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Non-engineering measures

Measures	Noise reduction	Remarks
Banning heavy vehicles	Up to 3 dB(A)	Effect depends on percentage of heavy vehicles in the flow and the total volume of traffic
Speed reduction	Up to 1 dB(A)	If speed limit is reduced from 70 kph to 50 kph
Pedestrianization	Up to 3 to 7 dB(A)	Effect depends on actual arrangements

Deliberations on the impact of excessive traffic noise and provision of noise barrier

21. Members of the Council have all along been very concerned about the impact of excessive traffic noise on nearby residents. The Transport Panel and the Environmental Affairs Panel held regular meetings to follow up on issues relating to measures to address noise impact of existing roads.

22. Referring to the new policy to address traffic noise of existing roads, members had expressed concern about the slow progress of the retrofitting and resurfacing programme. Whilst the proposed programme would bring about benefits to about 64 000 residential units, they were concerned that the remaining 236 000 residential units which were not covered under the proposed programme would have to continue their suffering. They therefore urged the Administration to explore measures to minimize the nuisance caused to them. A site visit was conducted on 21 October 2002 to ascertain the noise impact caused by different types of vehicles to the affected dwellings along Texaco Road Flyover during night-time restriction hours of the proposed traffic management scheme.

23. On the provision of noise barriers, some members were of the view that more trees should be planted along the roads to abate traffic noise. They also queried about the effectiveness of noise barriers in reducing traffic noise. Apart from visual intrusion, provision of noise barriers would take up a lot of space and affect air circulation. It was also doubtful whether provision of

noise barrier was cost-effective. The Administration should therefore adopt all possible measures to eliminate sources of traffic noise during the early stages of planning and designing new roads.

24. Some members however held the view that every efforts should be made to minimize the noise nuisance caused to residents as far as possible. If the provision of high noise barriers was proved to be effective in reducing the noise level, even by a small proportion, the Administration should take the initiative to adopt this abatement measure.

25. An oral question on the installation of noise barrier was raised by Ir Dr Hon Raymond HO on 6 November 2002. Hon LAU Kong-wah also raised two questions on the erection of noise barriers at central divider of roads and the choice of colours of noise barriers on 12 and 19 June 2002.

Council Business Division 1
Legislative Council Secretariat
15 November 2002

For discussion
on 7 October 1998

PWSC(98-99)26

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 706 - HIGHWAYS

Transport - Roads

561TH - Widening of Tolo Highway between Island House interchange and Ma Liu Shui interchange

Members are invited to recommend to Finance Committee the upgrading of **561TH** to Category A at an estimated cost of \$2,507.2 million in money-of-the-day prices.

PROBLEM

The section of Tolo Highway between Tai Po and Sha Tin will be unable to cope with future traffic demand. Also, the existing emergency telephone system along the road is approaching the end of its serviceable life and there is no closed circuit television (CCTV) system to enable efficient traffic management and speedy response to incidents.

PROPOSAL

2. The Director of Highways, with the support of the Secretary for Transport, proposes to upgrade **561TH** to Category A at an estimated cost of \$2,507.2 million in money-of-the-day (MOD) prices for the widening of the section of Tolo Highway between Island House interchange and Ma Liu Shui interchange (the Highway), and the provision of a CCTV system and a new emergency telephone system along this section of the Highway.

/PROJECT...

PROJECT SCOPE AND NATURE

3. The scope of works for **561TH** includes -
- (a) providing one additional lane, 3.65 metres wide and 5.4 kilometres long, in each direction of Tolo Highway between Island House interchange and Ma Liu Shui interchange, and improvements to the existing road curves of this section of the Highway;
 - (b) associated reclamation and construction of a seawall;
 - (c) extension of existing vehicular bridges and pedestrian/cyclist subways;
 - (d) providing a CCTV system and an emergency telephone system along the same section of the Highway;
 - (e) widening of the existing cycle track along the same section of the Highway from 4.4 metres to 6.0 metres and providing a 2.5-metre wide footpath on the seaward side of the cycle track;
 - (f) reprovisioning of Chinese University of Hong Kong (CUHK) facilities affected by the widening; and
 - (g) ancillary works on road resurfacing, drainage, road lighting, environmental mitigation, landscape, traffic signs and pedestrian/cyclist facilities.

JUSTIFICATION

4. The Tolo Highway is a strategic road link serving the Northeast New Territories and cross boundary traffic. The average daily traffic on the Highway has been growing at a rate of about 18% per annum in recent years. As we anticipate that the traffic demand on the Highway will continue to grow, we need to improve the road capacity by widening this section of the Highway from dual-3 lane to

/dual-4....

dual-4 lane by 2001. The following table shows the projected volume/capacity¹ (V/C) ratios in 2001 during morning peak hours with and without the proposed widening -

		V/C ratio (Year 2001)	
		South-bound	North-bound
(a)	Without the proposed road widening	1.32	1.04
(b)	With the proposed road widening	1.00	0.78

5. Due to the presence of an existing railway on the land-ward side of the Highway, we will have to proceed with the widening works on its seaward side through limited reclamation and associated construction of seawalls. We will also need to extend the existing pedestrian subways and vehicular bridges running along the Highway to cope with its new width.

6. There is currently no CCTV system on Tolo Highway to monitor traffic flow and to identify incidents. The existing emergency telephone system on the Highway is also approaching the end of its serviceable life after thirteen years of service. As part of the road widening project, we will replace the existing emergency telephone system and install a CCTV system on the Highway to enable speedy responses to and reporting of traffic incidents.

7. Cycling along this section of Highway has been a popular public activity, particularly during weekends and holidays. To enhance safety standards and comfort, we will widen the existing cycle track with an additional footpath along the seaward side of the Highway.

/8...

¹ The capacity here refers to the design capacity of the road. A V/C ratio equal to or less than 1.0 means that the road has sufficient capacity to cope with the volume of vehicular traffic under consideration. A V/C ratio above 1.0 indicates the onset of mild congestion; above 1.2 indicates more serious congestion with traffic speeds progressively deteriorating with further increase in traffic.

8. Due to the constraint of the railway, the project will take up 1 237 square metres of land in the Eastern Campus of CUHK and affect an internal road and a water sports facility of the University. We need to reprovise these facilities.

9. As a result of the increase in traffic flow after the completion of the project, we expect that the residents along the widened Highway will be exposed to noise levels higher than the upper limits stipulated in the Hong Kong Planning Standards and Guidelines. We will provide noise barriers along most parts of the Highway to mitigate traffic noise.

FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the project to be \$2,507.2 million in MOD prices (see paragraph 11 below), made up as follows -

	\$ million
(a) Roads and drains	523.5
(b) Reclamation and seawall	336.2
(c) Widening of existing vehicular bridges and extension of existing pedestrian subways	69.0
(d) CCTV and emergency telephone systems	35.7
(e) Noise barriers	593.1
(f) Landscaping works	45.1
(g) Reprovisioning of affected facilities in CUHK	3.0

/(h)....

(h) Consultants' fees for		137.1	
(i) construction stage	4.6		
(ii) site staff costs	131.4		
(iii) Electrical and Mechanical Services Trading Fund (EMSTF) charges	1.1		
(i) Contingencies		174.3	
		<hr/>	
	Sub-total	1,917.0	(at December 1997 prices)
(j) Inflation allowance		590.2	
		<hr/>	
	Total	2,507.2	(in MOD prices)
		<hr/>	

A breakdown of the estimates for consultants' fees and site staff costs is at the Enclosure.

11. Subject to approval, we will phase the expenditure as follows -

Year	\$ million (Dec 1997)	Price adjustment factor	\$ million (MOD)
1998 - 99	5.4	1.06000	5.7
1999 - 2000	305.7	1.14878	351.2
2000 - 01	529.0	1.24642	659.4

/2001 - 02....

2001 - 02	845.7	1.35237	1,143.7
2002 - 03	168.1	1.46732	246.7
2003 - 04	63.1	1.59204	100.5
	—————		—————
	1,917.0		2,507.2
	—————		—————

12. We have derived the MOD estimate on the basis of the Government forecasts of trend labour and construction prices for the period 1998 to 2004. We will tender the proposed works under a re-measurement contract because the quantities for the reclamation works and the foundations of the bridges and the noise barriers are subject to variations due to actual site conditions. We will provide for adjustment due to inflation in the contract because the construction period will last longer than 21 months.

13. We estimate the annual recurrent expenditure to be \$23.8 million.

PUBLIC CONSULTATION

14. We consulted the then Tai Po District Board and the Transport and Traffic Committee of the then Sha Tin District Board on 29 April 1997 and 21 May 1997 respectively. Both supported the project.

15. We gazetted the proposed works under the Roads (Works, Use and Compensation) Ordinance on 5 December 1997 and received three objections. One objector withdrew his objection after we agreed to provide additional measures to mitigate the potential ecological impact. A second objector queried the genuine need for the project and also expressed concern about the environmental impacts of the works. We provided him with additional information regarding the forecast traffic conditions and details of the proposed works and he eventually withdrew the objection. The last objector was CUHK, who requested a compensatory land allocation because part of the proposed works would encroach upon the Eastern Campus of the University. CUHK withdrew the objection after we reached an

/agreement....

agreement-in-principle on a land exchange proposal. The Secretary for Transport authorised the proposed works under the Ordinance on 4 September 1998.

ENVIRONMENTAL IMPLICATIONS

16. We completed an Environmental Impact Assessment (EIA) for the project in April 1997. The EIA identified traffic noise as the key issue, and recommended low noise road surfacing and a package of vertical and canopy noise barriers from 1.5m to 8m high to mitigate the problem. The EIA concluded that with these and other recommended mitigation measures (such as the provision of an air quality buffer zone for future developments and implementation of an Environmental Monitoring and Audit Programme during the construction stage), the environmental impacts of the project will be controlled to within the established standards. The Advisory Council on the Environment endorsed the EIA report in May 1997. We have incorporated all the recommended environmental mitigation measures in the detailed design.

LAND ACQUISITION

17. This project will take up 1 237 square metres of land in the Eastern Campus of CUHK. The clearance will affect an internal road and a water sports facility in the University. We have reached an agreement-in-principle with CUHK on a land exchange package, in lieu of resumption, and will re-provision the affected CUHK facilities.

BACKGROUND INFORMATION

18. We upgraded **561TH** to Category B in August 1995. We also upgraded part of **561TH** as **713TH** to Category A, entitled "Widening of Tolo Highway between Island House interchange and Ma Liu Shui interchange - detailed design and ground investigation" in June 1997 at an estimated cost of \$49.6 million in MOD prices.

19. We have substantially completed the detailed design and working drawings for the proposed roadworks. We plan to start the roadworks in December 1998 for completion in December 2001.

20. We also plan to widen the remaining section of Tolo Highway and Fanling Highway between Island House interchange and Fanling, with installation of CCTV and renewal of existing emergency telephone systems, under **720TH** which was included in Category B in September 1998. We plan to start the detailed investigations for this project in early 1999 and the construction works in mid 2002 for completion in 2005 and we will seek necessary funding from the Committee in due course.

Transport Bureau
September 1998

(PWSC0016/WIN1)

561TH - Widening of Tolo Highway between Island House interchange and Ma Liu Shui interchange

Breakdown of estimates for consultants' fees and site staff costs (at December 1997 prices)

Consultants' staff costs			Estimated man-months	Average MPS* salary point	Multiplier factor	Estimated fee (\$ million)
(a)	Administration of contract	Professional	24	40	3.0	4.2
		Technical	7	16	3.0	0.4
(b)	Site supervision by resident site staff employed by the consultants	Professional	479	40	2.1	59.6
		Technical	1 722	16	2.1	71.8
(c)	Electrical and Mechanical Services Trading Fund					1.1
					Total	137.1

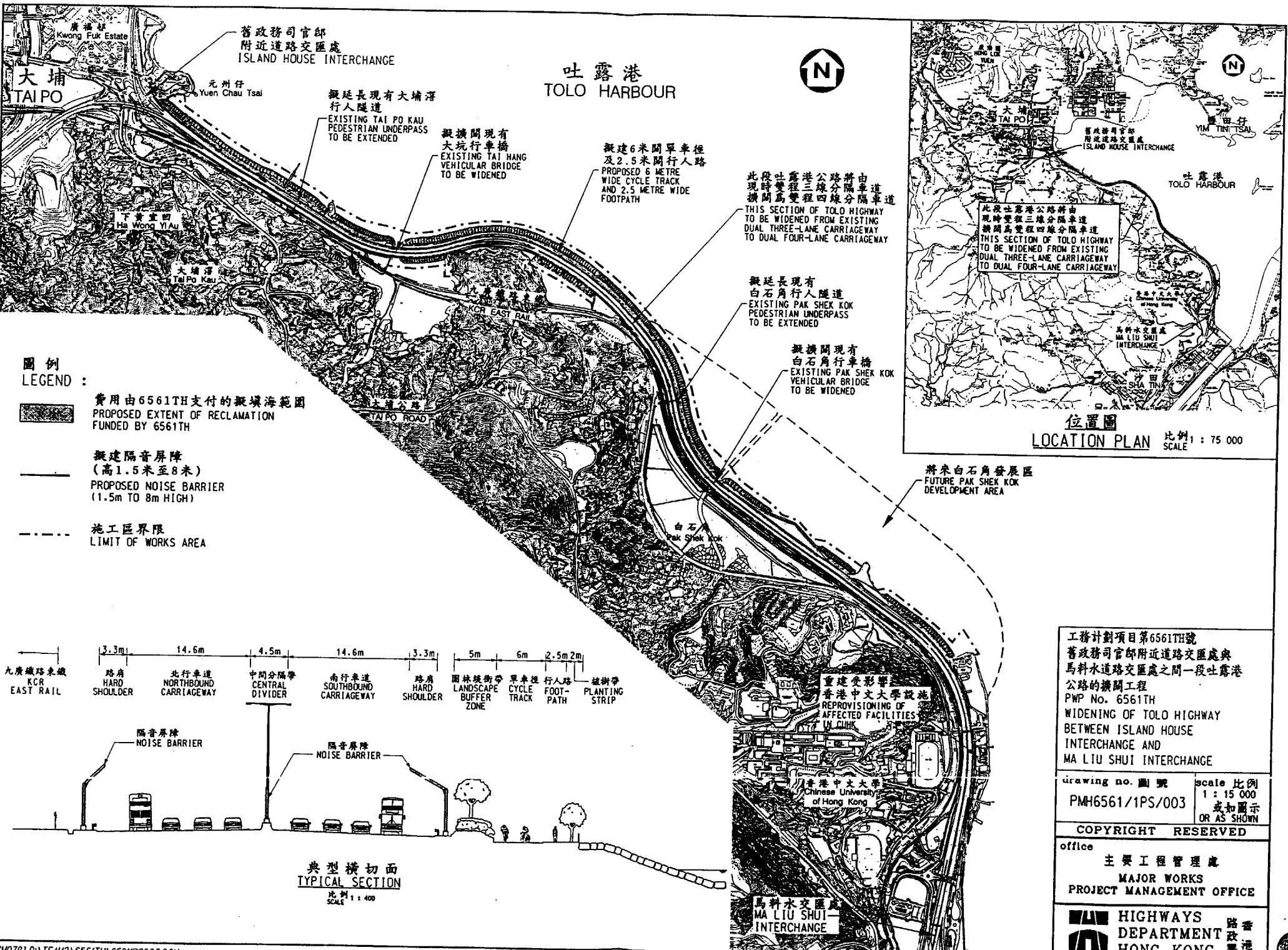
*MPS = Master Pay Scale

Notes

1. A multiplier factor of 3 is applied to the average MPS point to arrive at the full staff costs including the consultants' overheads and profit, as the staff will be employed in the consultants' offices. (At 1.4.97 MPS pt. 40 = \$59,210 p.m. and MPS pt. 16 = \$19,860 p.m.) A multiplier factor of 2.1 is applied in the case of site staff supplied by the consultants.
2. The consultants' fees for work in the construction stage is a provisional part of the lump sum price quoted by the selected consultants under Agreement No. CE96/96 "Design and Construction Assignment for Widening of Tolo Highway between Island House Interchange and Ma Liu Shui Interchange" which is available for acceptance by Government subject to approval of upgrading of **561TH** to Category A.

3. Since the establishment of the EMSTF on 1 August 1996 under the Trading Funds Ordinance, government departments pay for design and technical consultancy services for electrical and mechanical (E&M) installations provided by EMSD. The services rendered for this project include checking consultants' submissions on all E&M installations and providing technical advice to the Government on all E&M works and their impacts on the project.

(PWSC0016/WIN1)



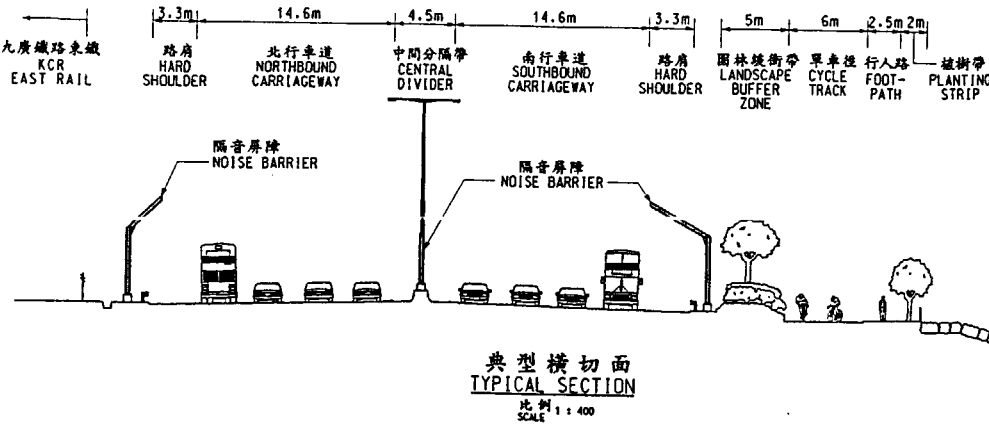
吐露港
TOLO HARBOUR



位置圖
LOCATION PLAN 比例 1 : 75 000
SCALE

圖例
LEGEND :

- 費用由6561TH支付的擬填海範圍
PROPOSED EXTENT OF RECLAMATION FUNDED BY 6561TH
- 擬建隔音屏障
(高1.5米至8米)
PROPOSED NOISE BARRIER
(1.5m TO 8m HIGH)
- 施工區界限
LIMIT OF WORKS AREA



此段吐露港公路將由
現時雙程三線分隔車道
擴闊為雙程四線分隔車道
THIS SECTION OF TOLO HIGHWAY
TO BE WIDENED FROM EXISTING
DUAL THREE-LANE CARRIAGEWAY
TO DUAL FOUR-LANE CARRIAGEWAY

擬延長現有
白石角行人隧道
EXISTING PAK SHEK KOK
PEDESTRIAN UNDERPASS
TO BE EXTENDED

擬擴闊現有
白石角行車橋
EXISTING PAK SHEK KOK
VEHICULAR BRIDGE
TO BE WIDENED

擬建6米闊單車徑
及2.5米闊行人路
PROPOSED 6 METRE
WIDE CYCLE TRACK
AND 2.5 METRE WIDE
FOOTPATH

擬延長現有
大埔潭行人隧道
EXISTING TAI PO KAU
PEDESTRIAN UNDERPASS
TO BE EXTENDED

擬擴闊現有
大坑行車橋
EXISTING TAI HANG
VEHICULAR BRIDGE
TO BE WIDENED

將來白石角發展區
FUTURE PAK SHEK KOK
DEVELOPMENT AREA

重建受影響
香港中文大學設施
REPROVISIONING OF
AFFECTED FACILITIES
IN CUHK

香港中文大學
Chinese University
of Hong Kong

馬料水交匯處
MA LIU SHUI
INTERCHANGE

工務計劃項目第6561TH號
舊政務司官邸附近道路交匯處與
馬料水道路交匯處之間一段吐露港
公路的擴闊工程
PWP No. 6561TH
WIDENING OF TOLO HIGHWAY
BETWEEN ISLAND HOUSE
INTERCHANGE AND
MA LIU SHUI INTERCHANGE

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PROJECT MANAGEMENT OFFICE

HIGHWAYS
DEPARTMENT
HONG KONG
路政署
香港

立法會
Legislative Council

LC Paper No. PWSC41/98-99
(These minutes have been
seen by the Administration)

Ref : CB1/F/2/2

**Public Works Subcommittee of the Finance Committee
of the Legislative Council**

**Minutes of the sixth meeting
held at the Legislative Council Chamber
on Wednesday, 21 October 1998, at 10:45 am**

Members present :

Hon HO Sai-chu, JP (Chairman)
Dr Hon Raymond HO Chung-tai, JP (Deputy Chairman)
Hon Kenneth TING Woo-shou, JP
Hon Cyd HO Sau-lan
Hon Edward HO Sing-tin, JP
Hon LEE Wing-tat
Hon Eric LI Ka-cheung, JP
Hon Fred LI Wah-ming
Hon Margaret NG
Hon James TO Kun-sun
Hon Ambrose CHEUNG Wing-sum, JP
Hon CHAN Yuen-han
Hon Gary CHENG Kai-nam
Hon SIN Chung-kai
Hon WONG Yung-kan
Hon LAU Kong-wah
Hon Mrs Miriam LAU Kin-ye, JP
Hon Emily LAU Wai-hing, JP
Hon Andrew CHENG Kar-foo
Hon SZETO Wah
Hon TAM Yiu-chung, JP

Members absent :

Hon James TIEN Pei-chun, JP
Hon Albert HO Chun-yan
Prof Hon NG Ching-fai

Hon CHEUNG Man-kwong
Hon Christine LOH
Hon CHAN Kam-lam
Dr Hon LEONG Che-hung, JP
Hon Timothy FOK Tsun-ting, JP

Public officers attending :

Miss Emma LAU	Deputy Secretary for the Treasury (3)
Mr Bowen LEUNG, JP	Secretary for Planning, Environment and Lands
Mr S S LEE, JP	Secretary for Works Ag.
Mr Rob LAW, JP	Director of Environmental Protection
Mr Edward CHU	Principal Assistant Secretary for the Treasury (Works) Ag.
Mr K S LEUNG, JP	Director of Highways
Ms Shirley LAM	Principal Assistant Secretary for Transport (5)
Mr SIN Kwok-keung	Chief Traffic Engineer (New Territories East), Transport Department
Mr LEE Yan-ming	Chief Traffic Engineer (New Territories West), Transport Department
Mr M S HU, JP	Director of Water Supplies
Mrs Joanna KWOK	Chief Traffic Engineer/Kowloon, Transport Department
Mr H W TIN	Principal Assistant Secretary for Housing (Project Management)
Mr KWAN Chi-wai	Chief Traffic Engineer/Hong Kong, Transport Department
Mr LO Yiu-ching, JP	Director of Territory Development

Clerk in attendance:

Miss Polly YEUNG	Chief Assistant Secretary (1)3
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Staff in attendance:

Ms Pauline NG	Assistant Secretary General 1
Ms Anita SIT	Senior Assistant Secretary (1)8

PUBLIC WORKS PROGRAMME

Upgrading of projects to Category A

HEAD 706 - HIGHWAYS

PWSC(98-98)26 561TH Widening of Tolo Highway between Island House interchange and Ma Liu Shui interchange

1. A member commented that the estimated site staff costs of \$131.4 million was on the high side. He pointed out that although the section of Tolo Highway to be widened was 5.4 kilometres long, it was largely a straight through carriageway and thus the proposed roadworks were not technically complicated. In response, the Director of Highways (DHy) remarked that this was a large-scale project with reclamation and road works and the works were required to be completed within a tight schedule. It was anticipated that about 10 professionals and 49 technical/clerical staff would be engaged to supervise and manage the works on site during the construction period. DHy advised that the site staff costs, which accounted for only 7.7% of the estimated total construction costs of this project, should not be regarded as exceptionally high when compared to the site staff costs of roadworks projects of similar scale. He however took note of members' concern that the site staff establishment should be no larger than necessary to control project costs.

2. A member queried whether the estimated 7% annual increase in cross boundary traffic had been over-estimated and pointed out that the growth of freight transport had slowed down over the past year and that the local terminals for river freight, which had been commissioned recently, would help divert some land freight transport. In reply, the Principal Assistant Secretary for Transport(5) (PAS/T(5)) advised that the Planning Department was undertaking a study on cross boundary traffic. Pending the outcome of the study, it was considered appropriate to project future cross boundary traffic on the basis of the average growth rate of the past five years. She remarked that apart from the increase in cross boundary traffic, there were other factors contributing to the increase in traffic flow on Tolo Highway such as the growth in population in the region. As the existing capacity of Tolo Highway was already insufficient to cope with traffic flows during peak hours, the Administration considered it necessary to widen the highway to cope with both the present and future traffic demand.

3. Responding to a members' enquiry about plans to improve the road networks to the north and south of the concerned section of Tolo Highway, PAS/T(5) advised that there were co-ordinated road improvement plans for the region. A proposal for the funding of the investigation and preliminary design for the widening of the remaining section of Tolo Highway and Fanling Highway

between Island House interchange and Fanling would be submitted to this Subcommittee shortly. There were also plans to widen the roads south of the Tolo Highway leading to Ma On Shan and Shatin as set out in the supplementary information paper PWSCI(98-99)14 (circulated to members vide LC Paper No. 32/98-99 dated 20 October 1998).

4. The item was voted on and endorsed.

~~**PWSC(98-99)27 593TH Hiram's Highway improvement phase 3 :
improvement between Nam Wai and Ho
Chung and upgrading local access roads**~~

5. A member remarked that in view of the current high rate of unemployment, the public were particularly concerned about the job opportunities arising from the implementation of public works projects. She suggested that relevant information on new job opportunities that could be created by public works projects be included in the funding proposals. In response, the Secretary for Works said that although such information could be provided, it might not be easy to relate the information to the overall employment situation as each project had a specific implementation schedule. The Chairman added that while the number of additional jobs created might not be the most critical factor in considering a project, he shared the member's view that this was a matter of genuine public concern. At this request, the Administration agreed to consider including, where practicable, the relevant information in future submissions.

Admin.

6. As regards the job opportunities arising from the present project, DHy informed members that about 90 jobs would be created by this project.

7. The item was voted on and endorsed.

~~**PWSC(98-99)28 721TH Widening of Yuen Long Highway between
Lam Tei and Shap Pat Heung Interchange**~~

8. Addressing a member's concern about the impact of the proposed roadworks on the village developments along the section of the Yuen Long Highway (YLH) to be widened during and after the construction period, DHy advised that a road widening reserve had been provided when the highway was first constructed. The road widening works would be carried out on the reserve and thus would have minimal impact on the few existing developments along YLH. If existing access roads or pedestrian ways were affected by the works, the contractor would be required to implement appropriate temporary traffic measures to maintain access. Addressing the member's concern about the erection of central divider under the project which would restrict traffic from making turns, he clarified that there

already existed a central divider on the YLH and traffic should not be adversely affected by the proposed widening works. PAS/T(5) supplemented that the present proposal only covered the preliminary design and ground investigation works. When the project was ready to proceed to the construction stage, the proposed roadworks would be gazetted and any person who believed that he/she would be adversely affected by such works could raise objections in accordance with the Roads (Works, Use and Compensation) Ordinance.

Admin.

9. In reply to a member 僂 enquiry about the proposed arrangement of carrying out ground investigations for the detailed design concurrently with the preliminary design of the project, DHy advised that the purpose of the arrangement was to shorten the duration of the detailed design stage so as to expedite the whole project. The arrangement was feasible in this project because the proposed road widening would basically follow the existing alignment of YLH and thus the location and amount of ground investigation works could be ascertained at an early stage. At the member 僂 request, DHy agreed to provide further information on the estimated cost savings as a result of the arrangement.

10. A member queried the necessity of the proposed road widening if the construction of Route 10 - North Lantau to Yuen Long could be expedited to tie in with the completion of the Deep Bay Link in 2004, thus diverting some cross boundary traffic away from YLH. PAS/T(5) affirmed the need for the proposed road widening and explained that taking into account the scheduled completion of Route 10 by 2007, the volume to capacity (V/C) ratio of YLH without widening would reach 1.49 by year 2011.

11. Noting that the existing dual 2-lane YLH was only completed in 1994 but was already anticipated to be operating beyond capacity by year 2001, members queried the cost-effectiveness of constructing a dual 2-lane carriageway, instead of a dual 3-lane carriageway, in the first place. In this connection, they enquired about the expected life span of new trunk roads under the existing policy. In response, DHy and PAS(T)5 advised that new trunk roads were usually planned to meet traffic demand for 10 to 20 years upon completion. The decision to construct a dual 2-lane carriageway or otherwise depended on the traffic demand forecast when a new road was planned. In the case of YLH (formerly called Yuen Long Bypass), the original purpose of the highway was to divert some traffic away from Castle Peak Road to alleviate traffic congestion in Yuen Long New Town. The traffic demand forecast at the planning stage only justified the construction of a dual 2-lane carriageway while the future need was catered for by providing a road widening reserve along the dual 2-lane carriageway. The Government had been conducting on-going monitoring of the traffic flows on YLH and having regard to recent territory development plans and transport studies, it was anticipated that traffic flows on YLH would increase significantly during the next 10-year period due to substantial population growth in the North-west New Territories and the increase in cross boundary traffic routing through the YLH upon the completion of

the Deep Bay Link by 2004. These future developments gave rise to the need for the widening of YLH.

12. In connection with road planning, a member commented that new trunk roads in Hong Kong should be built to the same standard capacity of trunk roads in most other metropolitan cities. The trunk roads should have a minimum configuration of dual 3-lanes or have a road widening reserve for subsequent widening. This would obviate the problem of not having sufficient land for road widening in future. In response, DHy explained that most trunk roads completed in recent years were of the dual 3-lane design. Besides, recent detailed traffic studies had allowed additional road capacities in the assessment and more carriageway widths would be assigned when considered necessary.

XX 13. Taking note of the Administration's explanation, some members were still concerned about the mechanism for the planning of new roads and road improvements, with particular regard to cost-effectiveness. In view of members' concerns, the Chairman suggested that the policy issues on road planning be followed up further by the relevant Panel.

14. The item was voted on and endorsed.

HEAD 709 - WATERWORKS

PWSC(98-99)23 86WC Water supply to Pak Shek Kok, Tai Po - remaining works

15. In reply to a member's enquiry about the incorporation of the main laying works under the present proposal into the roadworks contract of the Tolo Highway widening project 561TH under item PWSC (98-99)26, the Director of Water Supplies (DWS) and DHy advised that funds for the main laying works had not been provided for in project 561TH. Subject to approval of the present proposal, funds would be allocated to project 561TH for carrying out the main laying works. This entrustment arrangement could help save time and costs by avoiding repetitive road opening and other co-ordination problems arising from two contractors working on the same site.

16. In connection with road openings, the member enquired about measures to obviate the need for frequent re-opening of a road by different parties. DHy, in reply, advised that a computerized system was in place to co-ordinate and monitor road opening by utility operators. To reduce the disruption caused by road openings, works in areas with heavy traffic would be restricted to be carried out at night time. Utility operators were also required to conduct traffic impact assessment studies and submit plans for traffic diversion before commencing large-scale utility installation works. He pointed out that as a result of rapid development and redevelopment of the territory and the many different kinds of

utility trunking and cables underground, a certain extent of disruption caused by road openings was inevitable despite active co-ordination and monitoring. He further informed members that there were about 60,000 applications for road opening works every year and the number of road openings in the territory at any one time was about 2,000.

17. In reply to a member 僂 enquiry on whether the proposed water supply facilities had taken into account the water demand of the future developments in the Pak Shek Kok (PSK) reclamation area, DWS confirmed that the present project was not targeted at meeting the water demand of the future developments in the PSK reclamation area, which had yet to be ascertained. Future water supply facilities for this area would require separate funding, but the remaining part of the present project under Category B could be modified to provide the necessary interface with the future facilities for the PSK reclamation area.

18. The item was voted on and endorsed.

HEAD 706 - HIGHWAYS

PWSC(98-99)33 125TB Pedestrian subway at junction of Kowloon Park Drive and Peking Road

19. In reply to a member 僂 enquiry about the extended section of the proposed pedestrian subway leading to the Lippo Sun Plaza, DHy advised that this extended section had been proposed and would be funded by the private developer concerned. The Government agreed to connect the proposed subway to this extended section because this arrangement would provide pedestrians with an additional access to and from the subway without any additional cost to the Government.

20. On the feasibility of providing a direct exit from the subway to the pedestrian walkway at the western end, DHy and the Chief Traffic Engineer/Kowloon, Transport Department (CTE/K) advised that this was not feasible due to insufficient width of the pedestrian walkway; a staircase exit would need to be 2.5 metres in width discounting the walls on both sides while the pedestrian way was only 4.5 metres in width. Thus, providing an exit direct to the pedestrian walkway would cause a bottleneck in the pedestrian flow on the walkway.

21. As all the exits at the western end of the proposed subway had to be routed through private developments, members expressed concern about the opening hours and the reliability of the access facilities within the private developments. The Administration assured members that the Administration had made and would continue to make the necessary arrangements to ensure that there would be 24-

hour access to the subway at both ends. At the western end, while the developer of Lippo Sun Plaza had agreed to open its access facilities between 7:00 am to 10:00 pm each day, the developer of No. 1 Peking Road was required to construct and maintain a staircase and an escalator leading to the pedestrian walkway in front of No. 1 Peking Road at its own cost, and to ensure that an access would be open to the public round the clock. The Administration added that these requirements had been included in the relevant land sale conditions and were legally binding on the developer.

22. In reply to members' enquiry about the location of the access facilities within the development at No. 1 Peking Road, DHy and CTE/K advised that the detailed design of the access facilities was yet to be finalised at this stage because the overall design of the development on the site was still underway. In any case, under the land sale conditions, the developer was required to seek the Administration 僱 agreement to the design of the access facilities. The Administration would ensure that the access facilities would provide quick and direct access between the subway and the pedestrian walkway. In reply to a member, DHy said that the access facilities at No. 1 Peking Road were scheduled for commissioning by 2002. He confirmed that pending availability of the 24-hour access to the subway at both ends, the existing at-grade pedestrian crossing of Kowloon Park Drive would be retained.

23. Responding to a member 僱 enquiries about the operation and the estimated construction cost of the lift at the eastern end of the subway, DHy advised that because there was inadequate space for access ramps, a lift had to be provided to facilitate access for disabled persons. The Electrical and Mechanical Services Department would be responsible for the maintenance and repairs of the lift. Presently, there were lifts provided for disabled persons at the Central Walkway System near the General Post Office and the footbridge linking the Wan Chai Station of the Mass Transit Railway. They were operated in the same manner and were functioning well. At the member 僱 request, DHy agreed to provide information on the construction cost of the lift.

Admin.

24. A member remarked that the pedestrian walkways along Peking Road between Kowloon Park Drive and Nathan Road were insufficient to cope with the existing pedestrian traffic and that there was no designated pedestrian crossing in this area. While acknowledging the situation, CTE/K nevertheless advised that there was little space left for widening the pedestrian walkways. She added that although there was no immediate plan to improve the traffic in the area, the feasibility of making improvement would be further examined in the context of the East Rail extension from Hung Hom to Tsim Sha Tsui.

25. On some members' concern that the extended section to Lippo Sun Plaza might become a crime-prone spot during the closure of the access facilities at the Plaza between 10:00 pm and 7:00 am, DHy agreed to consult the relevant parties,

including the Police, on the most appropriate location of the gate for the extended section.

26. On the provision of directional signs for pedestrians, CTE/K advised that the Transport Department would post/erect signs at appropriate locations to direct pedestrians from various directions to make use of the subway to cross the Kowloon Park Drive. She added that it was feasible to put up these signs and adjust their locations when needed.

27. The item was voted on and endorsed.

HEAD 711 - HOUSING

PWSC(98-99)29 642TH Improvement to Island Eastern Corridor section between North Point interchange and Sai Wan Ho - consultants' fees and site investigations

28. On how the proposed road improvements could address the traffic congestion and safety problems on the Island Eastern Corridor (IEC), DHy advised that presently, traffic congestion mainly occurred on the eastern and western approach roads to the Eastern Harbour Crossing (EHC) due to the queuing up of tunnel bound vehicles and the lack of traffic lanes to cater for eastbound and westbound through traffic. The main thrust of the present proposal was to provide additional traffic lanes along the IEC to cater for the eastbound and westbound through traffic, thus reducing the traffic congestion on the section of the IEC near EHC and alleviating the weaving and merging problems near the EHC. DHy referred to the layout plan attached to the paper and pointed out that two new elevated carriageways would be constructed along the IEC, one with two eastbound lanes and the other with one westbound lane. The other proposed improvements were ancillary to the provision of these additional traffic lanes.

29. Noting that the V/C ratios of the critical sections of the IEC with improvement would only be 0.76 and 0.75 in year 2011, a member queried the justification for the proposed improvements at their present scale and enquired about alternative traffic management measures. In response, the Administration explained that the V/C ratios were based on the number of vehicles on a carriageway at one time and the capacity of the carriageway. In this case, the ratios did not fully reflect the situation of long traffic queues near the EHC which caused merging and weaving problems and delays to through traffic. The proposed road improvements sought to address these problems by separating the through traffic from the tunnel bound traffic. It was feasible to implement traffic

control measures, such as prohibiting the direct entry of vehicles to the EHC from slip roads to IEC, but they would cause much inconvenience to road users and could only temporarily relieve the traffic congestion and safety problems. The proposed road improvements on the other hand could provide a fundamental and long term solution to those problems.

30. A member queried whether the proposed elevated carriageway along the IEC from Man Hong Street to the EHC would require reclamation, and if so, whether the reclamation works would be subject to the provisions of the Protection of the Harbour Ordinance (Cap. 531) (the Ordinance). DHy advised that the location of the carriageway was outside the boundary of the harbour area covered by the Ordinance and the carriageway would be supported by piles constructed on the foreshore. Thus, no reclamation works would be required. In this connection, the Secretary for Planning, Environment and Lands pointed out that technically, the definition of "reclamation" in the Ordinance could also cover the construction of elevated structures within the "central harbour" as defined in the Ordinance.

31. In reply to a member's enquiry on the feasibility of expediting the project, DHy stressed that the present implementation schedule was already very tight; the detailed design was scheduled for completion by mid 2000 and the construction works would commence in mid 2000 for completion by late 2003.

32. The item was voted on and endorsed.

PWSC(98-99)30 212WF Transfer facilities from Butterfly Valley primary service reservoir to secondary service reservoirs in the metropolitan area - stage 1

33. The Deputy Secretary for the Treasury informed members that as some technical issues relating to the proposal needed to be resolved, the Administration would withdraw this item and resubmit it to the Subcommittee in the near future.

HEAD 707 - NEW TOWNS AND URBAN AREA DEVELOPMENT

PWSC(98-99)31 476CL Formation and servicing in area 36, Fanling

34. In reply to a member's enquiry, the Director of Territory Development (DTD) advised that there was a co-ordinated plan for flood control projects in North-east New Territories. Major flood control projects in the region included the river training and rehabilitation works underway in Area 30B in Fanling, and the river training and fish pond restoration of River Beas and of the lower

reaches of River Indus leading to Shenzhen River which would be submitted for funding approval at a later stage. On river training works in general, it was essential to complete the downstream works before the upstream works. In reply to the member, he confirmed that works on the section of Shek Sheung River between the box culvert at Pak Wo Road and Shenzhen River had been included under other projects, some of which had been completed.

35. As regards sewerage works under the project in question, DTD advised that the proposed sewer (shown red on the layout plan attached to the paper) would connect the future branch sewers in Area 36 and the existing main sewer leading to Shek Wu Hui Sewage Treatment Works. The branch sewers conveying the sewage generated from the future developments in Area 36 would be connected in phases to the proposed sewer under the respective housing development projects.

36. In reply to a member about the land resumption for the proposed works, DTD advised that approval of the Executive Council had been obtained for the required land resumption which would be carried out in the next few months to enable the proposed works to commence in February 1999. On the rehousing arrangement for the affected households, DTD informed members that of the 347 affected households, about 50 households involving 137 persons had been initially assessed to be ineligible for rehousing in public rental housing under the prevailing housing policy. Those clearerees found to be genuinely homeless on the day of clearance would be offered temporary accommodation in a transit centre, and their eligibility for public housing would be further assessed during the stay therein.

37. As a matter of policy, a member urged the Administration to offer public rental housing to persons affected by land acquisition for river training and rehabilitation works, irrespective of whether these persons possessed land entitlement. He also requested the Administration to provide compassionate rehousing for persons affected by the land acquisition under the present proposal on par with the rehousing offered to those persons affected by the river training works in Area 30B in Fanling.

Admin.

38. At members' request, the Administration agreed to provide, before the scheduled meeting of the Finance Committee on 13 November 1998 at which the proposal would be considered, information on the facilities available at the aforesaid transit centre and on the clearerees' usual period of stay therein before being offered interim housing or other types of accommodation, as well as to confirm its policy on the rehousing of persons affected by land acquisition or river training and rehabilitation works.

39. The item was voted on and endorsed. Miss Emily LAU requested that her reservation on the proposal be recorded.

40. The Subcommittee was adjourned at 12:45 pm.

Legislative Council Secretariat
9 November 1998