

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 - NEW TOWNS AND URBAN AREA DEVELOPMENT

New Territories North Development

Civil Engineering - Land development

**253CL - Yuen Long - Tuen Mun Corridor - engineering works for Hung
Shui Kiu and Ping Shan**

Members are invited to recommend to Finance
Committee -

- (a) the upgrading of part of **253CL**, entitled "Roads and associated engineering works for Hung Shui Kiu North" to Category A at an estimated cost of \$133.7 million in money-of-the-day prices; and
- (b) the retention of the remainder of **253CL**, re-titled "Yuen Long - Tuen Mun corridor - engineering works for Hung Shui Kiu and Ping Shan, remainder", in Category B.

PROBLEM

We need to construct roads, drains and sewers to serve the residential housing developments and other facilities at Hung Shui Kiu to meet growing housing demand.

/PROPOSAL

PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Planning and Lands, proposes to upgrade part of **253CL** to Category A at an estimated cost of \$133.7 million in money-of-the-day (MOD) prices for the construction of roads, drains and sewers to serve the residential housing developments at the northern part of Hung Shui Kiu.

PROJECT SCOPE AND NATURE

3. The scope of the part of **253CL** we now propose to upgrade to Category A comprises -

- (a) construction of about 1.36 kilometres of roads including Roads D2, L2 (Part), L5 and L5a with associated footpaths, cycle tracks and landscaping works;
- (b) improvement to the junction of Road D2 with Hung Tin Road;
- (c) construction of a vehicular bridge along Road D2 across the Hung Shui Kiu Drainage Channel;
- (d) installation of 540-metre noise barriers along Road D2 with heights ranging from two metres to five metres; and
- (e) associated drainage and sewerage works.

A site plan is at Enclosure 1.

4. The remainder of **253CL** to be retained in Category B comprises -

- (a) the eastern section of Road D2 between Hung Tin Road and Ping Kwai Road;
- (b) the western section of Road D2 between Hung Shui Kiu Main Street and Tin Ha Road;
- (c) site formation works in Areas 6, 7, 8 and 9B, Hung Shui Kiu; and

/(d)

- (d) associated drainage, sewerage and landscaping works.

JUSTIFICATION

5. In accordance with the Hung Shui Kiu Layout Plan (HSKLP) approved in December 1992, the area bounded by Roads D2, L1, Hung Tin Road and Hung Shui Kiu Main Street (the area within the blue line in Enclosure 1) is earmarked for housing developments, government/institution/community (GIC) facilities, and district open space.

6. Within the development area, there are three sites designated for housing development. The Hong Kong Housing Society (HKHS) plans to provide about 3 350 public housing flats for 12 000 persons in Area 13. The site formation works for public housing in Area 13 started in April 1999 for completion in June 2000 under **486CL** "Yuen Long – Tuen Mun corridor: site formation works for Areas 12 (part) and 13 in Hung Shui Kiu". The construction of the public housing project will commence in August 2000 for completion in phases between early 2004 and mid 2005. A private housing project in Area 9A with the provision of 48 flats was completed in March 2000. The land exchange application for another private housing project in Area 11, for which the planned population is about 1 200 people, is being processed. For the remaining sites, GIC facilities, such as a primary school, community centre and clinic, will be provided to serve the development.

7. To meet the increase in traffic and pedestrian flows generated by the above development, we need to provide the proposed roads with associated drains and sewers in step with the development. We plan to start the proposed works in November 2000 for completion in February 2003 to tie in with the population intake at Area 13.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the project to be \$133.7 million in MOD prices (see paragraph 9 below), made up as follows -

| | \$million |
|----------------------|------------------|
| (a) Road works | 39.0 |
| (b) Vehicular bridge | 11.0 |
| | /(c) |

| | \$million | |
|------------------------------------|------------------|---------------------------|
| (c) Drainage and sewerage works | 30.0 | |
| (d) Landscaping works | 6.0 | |
| (e) Noise barriers | 14.0 | |
| (f) Consultants fees for - | 11.5 | |
| (i) construction stage | 1.5 | |
| (ii) resident site staff costs | 10.0 | |
| (g) Contingencies | 11.0 | |
| Sub-total | 122.5 | (in December 1999 prices) |
| (h) Provision for price adjustment | 11.2 | |
| Total | 133.7 | (in MOD prices) |

Owing to insufficient in-house resources, DTD proposes to employ consultants to carry out the construction supervision. A breakdown by man months of the estimate for consultants' fees is at Enclosure 2.

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

| Year | \$million (Dec 1999) | Price adjustment factor | \$ million (MOD) |
|-------------|---------------------------------|--|-----------------------------|
| 2000 - 2001 | 6.3 | 1.00000 | 6.3 |
| 2001 - 2002 | 46.0 | 1.04500 | 48.1 |
| 2002 - 2003 | 52.0 | 1.10770 | 57.6 |
| 2003 - 2004 | 14.2 | 1.17416 | 16.7 |

/2004 - 2005

| | | | |
|-------------|-------|---------|-------|
| 2004 - 2005 | 4.0 | 1.24461 | 5.0 |
| | <hr/> | | <hr/> |
| | 122.5 | | 133.7 |
| | <hr/> | | <hr/> |

10. 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 2000 to 2005. We will tender the proposed works under a standard remeasurement contract because the contract involves extensive earthworks, the quantity of which may vary according to the actual ground conditions. The contract will provide for price adjustments because the contract period exceeds 21 months.

11. We estimate the annually recurrent expenditure to be \$1.27 million.

PUBLIC CONSULTATION

12. We consulted the Environmental Improvement Committee of Yuen Long Provisional District Board on the proposed works during the period from end 1996 to early 1997. During the last consultation on 23 January 1997, the Committee had no objection to the proposed works.

13. We gazetted the road works under the Roads (Works, Use and Compensation) Ordinance on 18 December 1998. Four objections were received but three of them were subsequently withdrawn. The remaining objection opposed the proposed road scheme on the grounds that it would jeopardize the objectors' small house developments. On 5 October 1999, the Chief Executive in Council overruled the objection in the public interest and authorised the proposed road works with minor modifications. The modifications include provision of additional retaining walls to reduce land resumption.

14. We presented the Tin Shui Wai/Yuen Long Development Programme (1999/2000 Edition), including this project, to Yuen Long District Council on 2 February 2000. Members did not raise any objection to the proposed works at the meeting. Local residents have requested early completion of the proposed road works.

ENVIRONMENTAL IMPLICATIONS

15. We completed an Environmental Impact Assessment (EIA) study in February 1998 to assess the environmental impacts arising from the construction and operation of the project. The EIA report concluded that with the implementation of a total of 540 metres of noise barriers with height ranging from two to five metres along the northern and southern perimeter of Road D2, the environmental impacts arising from the project could be mitigated to within established criteria. We estimate the cost of constructing the noise barriers to be \$14.0 million and have included this as part of the overall project estimate. For short-term impacts during construction, we will control noise, dust and site run-off nuisance in compliance with the established standards/guidelines through the implementation of appropriate mitigation measures in the works contract. These measures will include frequent watering of the site and the provision of wheel-washing facilities to reduce emission of fugitive dust, the use of silenced construction plant to reduce noise generation and other procedures as recommended in Environmental Protection Department's Recommended Pollution Control Clauses.

16. We have considered in the planning and design stages ways of minimizing the generation of construction and demolition materials (C&DM) by giving due consideration to designing the level and layout of the road works. We estimate about 8 000 cubic metres (m³) of public fill, mainly topsoil with engineering properties not suitable for reuse, will be delivered to public filling areas and about 2 500 m³ of decomposable C&D waste will be disposed of at landfills. Under the contract the contractor will be required to submit a waste management plan setting out waste avoidance and reduction measures including the allocation of an area for waste segregation on site to facilitate use/recycling of C&DM. The contractor should also ensure that the day-to-day operations on site comply with the waste management plan. We will encourage the contractor to use steel instead of timber in formwork and temporary works to further minimise the generation of C&DM. A trip-ticket system will be implemented to record and monitor the disposal, use and recycling of C&DM produced.

17. As regards landscaping works, we will provide about 2 200 square metres of amenity area along the southern side of Road D2 and both sides of Roads L2 (part) and L5. We will plant about 150 trees and shrubs along the roadside. We will use hydroseeding to protect formed slopes as appropriate. We have made provision for these landscaping works, estimated at \$6.0 million, within the overall project estimate.

/LAND

LAND ACQUISITION

18. We will resume about 2.05 hectares of agricultural land for the project. The land acquisition and clearance will affect 30 households involving 96 persons and 228 structures. These families will be offered ex-gratia allowances and, where eligible, accommodation in public housing in accordance with the established rehousing policy. We will charge the cost of land acquisition and clearance estimated at \$60.8 million to Head 701 - Land Acquisition.

BACKGROUND INFORMATION

19. We upgraded **253CL** to Category B in September 1995.

20. In January 1996, we engaged consultants to undertake the EIA study and detailed design for the proposed works. We have charged the cost of \$1.95 million to the block allocation **Subhead 7100CX** "New towns and urban area works, studies, investigations for items in Category D of the Public Works Programme". The consultants have completed the detailed design and drawings. We plan to start the works in November 2000 for completion in February 2003.

21. We plan to implement the remainder of **253CL** in stages starting from 2003 for completion by 2005.

22. We estimate that the proposed works will create some 110 new jobs comprising 19 professional or technical staff and 91 labourers during the construction period.

Planning and Lands Bureau
April 2000

[CL253-03.DOC]

**253CL – Yuen Long – Tuen Mun Corridor – engineering works for
Hung Shui Kiu and Ping Shan**

Breakdown of estimates for consultants' fees

| Consultants' staff costs | | | Estimated man months | Average MPS* salary point | Multiplier factor | Estimated fee (\$ million) |
|--|--|--------------|----------------------------|------------------------------------|----------------------|----------------------------------|
| (a) Consultants' fees for construction stage | | | | | | |
| (i) | contract | Professional | 6.5 | 40 | 2.4 | 1.0 |
| | administration | Technical | 4 | 16 | 2.4 | 0.2 |
| (ii) | preparation of as-built drawings | Professional | 0.5 | 40 | 2.4 | 0.1 |
| | | Technical | 4 | 16 | 2.4 | 0.2 |
| (b) Resident site staff costs | | | | | | |
| | | Professional | 42 | 40 | 1.7 | 4.5 |
| | | Technical | 155 | 16 | 1.7 | 5.5 |
| Total consultants' staff costs | | | | | | 11.5 |

* MPS = Master Pay Scale

Notes

1. A multiplier factor of 2.4 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. A multiplier factor of 1.7 is applied to the average MPS point in the case of resident site staff supplied by the consultants. (At 1.4.1999, MPS pt. 40 = \$62,780 p.m. and MPS pt. 16 = \$21,010 p.m.)
2. The figures given above are based on estimates prepared by the Director of Territory Development. The consultancy works for this project have been included as part of the overall consultancy agreement for the engineering works for Hung Shui Kiu.