

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 705 – CIVIL ENGINEERING

Civil Engineering – Multi-purpose

33CG – Setting up temporary construction waste sorting facilities at Tseung Kwan O Area 137 and Tuen Mun Area 38

Members are invited to recommend to Finance Committee the upgrading of **33CG** to Category A at an estimated cost of \$45.2 million in money-of-the-day prices for setting up temporary construction waste sorting facilities at Tseung Kwan O Area 137 and Tuen Mun Area 38.

PROBLEM

The construction waste disposal charging scheme will take effect soon. We need to set up and put into operation sorting facilities for construction waste timely to tie in with the implementation of the scheme.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for the Environment, Transport and Works (SETW), proposes to upgrade **33CG** to Category A at an estimated cost of \$45.2 million in money-of-the-day (MOD) prices for setting up temporary construction waste sorting facilities at Tseung Kwan O Area 137 and Tuen Mun Area 38.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of **33CG** comprises –
- (a) setting up and subsequent removal of temporary construction waste sorting facilities with associated infrastructure including temporary access roads, at Tseung Kwan O Area 137 with an area of about 2.7 hectares and Tuen Mun Area 38 with an area of about 1.8 hectares; and
 - (b) implementation of environmental mitigation measures for the works mentioned in item 3(a) above.

— Site plans showing the locations of the proposed works are at Enclosure 1.

4. We plan to commence the construction works in August 2005 for commissioning in October 2005. The operation of the proposed sorting facilities will last until December 2008.

JUSTIFICATION

5. The sorting facility is an important means to reduce construction waste to be disposed of at landfills. It includes a pre-sorting process and a mechanical screening process which involves separation of waste by using vibratory and rotary screens, magnetic separators, density separators and handpicking. Through the sorting operations, the inert portion is sorted out from the mixed construction waste and delivered to public fill reception facilities for reuse/recycling. Only the remaining non-inert waste is then disposed of at landfills.

6. The enabling legislation for the introduction of a construction waste disposal charging scheme was passed by the Legislative Council (LegCo) on 2 July 2004 and its subsidiary legislation passed on 5 January 2005. The scheme requires all construction wastes to be disposed of at either of the following facilities –

/(a)

- (a) landfills which accept construction waste containing not more than 50% by weight of inert materials;
- (b) sorting facilities which accept construction waste containing more than 50% by weight of inert materials; and
- (c) public fill reception facilities which accept construction waste consisting entirely of inert materials.

7. The construction waste disposal charging scheme will commence on a day to be appointed by SETW, possibly in summer 2005. We need to set up and put into operation sorting facilities for construction waste to enable the implementation of the scheme.

8. On 28 April 2003 and 24 November 2003, we consulted the LegCo Panel on Environmental Affairs on the detailed arrangements for the proposed construction waste disposal charging scheme. For sorting facilities, we suggested making available the facilities for privatisation through carrying out an open tender exercise for the setting up and operation of the facilities. If there were no valid tender bids in the tender exercise and privatisation of the sorting facilities could not materialise, we would make available the facilities as Government facilities to be funded by the Government but operated by private sector contractors. Panel Members had no adverse comments on the proposed arrangement.

9. The Administration invited bids to set up and operate the proposed sorting facilities through tenders for Short Term Tenancies in February 2005, but the outcome was unsatisfactory. Only four tenders were received for the two sites (one for Tseung Kwan O Area 137 and three for Tuen Mun Area 38) and none of them was considered acceptable. As such, we need to set up the sorting facilities using Government funds for timely implementation of the scheme.

FINANCIAL IMPLICATIONS

10. We estimate the cost of the proposed works to be \$45.2 million in MOD prices (see paragraph 11 below), made up as follows –

/(a)

| | \$ million | |
|--|-------------------|---------------------------------|
| (a) Temporary construction waste sorting facilities with associated infrastructure in Tseung Kwan O Area 137 | 23.7 | |
| (i) setting up sorting facilities | 21.2 | |
| (ii) setting up associated infrastructure | 2.3 | |
| (iii) removal of items 10(a)(i) and 10(a)(ii) | 0.2 | |
| (b) Temporary construction waste sorting facilities with associated infrastructure in Tuen Mun Area 38 | 16.3 | |
| (i) setting up sorting facilities | 14.8 | |
| (ii) setting up associated infrastructure | 1.4 | |
| (iii) removal of items 10(b)(i) and 10(b)(ii) | 0.1 | |
| (c) Environmental monitoring and mitigation measures | 1.5 | |
| (d) Contingencies | 3.5 | |
| | <hr/> | |
| | Sub-total | 45.0 (in September 2004 prices) |
| (e) Provision for price adjustment | 0.2 | |
| | <hr/> | |
| | Total | 45.2 (in MOD prices) |
| | <hr/> | |

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

| Year | \$ million (Sept 2004) | Price adjustment factor | \$ million (MOD) |
|-------------|-----------------------------------|--|-----------------------------|
| 2005 – 2006 | 43.8 | 1.00450 | 44.0 |
| 2006 – 2007 | 0.0 | 1.00576 | 0.0 |
| 2007 – 2008 | 0.0 | 1.00576 | 0.0 |
| 2008 – 2009 | 0.6 | 1.00576 | 0.6 |
| 2009 – 2010 | 0.6 | 1.00953 | 0.6 |
| | 45.0 | | 45.2 |

12. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period from 2005 to 2010. We will tender out the setting up, operation and removal of the facilities under a standard re-measurement contract because of the uncertainty in the amount of construction waste to be delivered to the proposed sorting facilities by the public. The contract will provide for price adjustments as the contract period will exceed 21 months.

13. We estimate that the annual revenue generated from sorting charge to be imposed upon implementation of the construction waste disposal charging scheme and recurrent expenditure arising from the operation of the proposed construction waste sorting facilities are as follows–

| Year | Revenue | Expenditure | Net revenue/ (expenditure)¹ |
|-------------|----------------|--------------------|---|
| | (\$ million) | (\$ million) | (\$ million) |
| 2005 – 2006 | 1.3 | 11.3 | (10.0) |
| 2006 – 2007 | 20.0 | 27.0 | (7.0) |
| 2007 – 2008 | 44.0 | 27.0 | 17.0 |
| 2008 – 2009 | 60.6 | 22.5 | 38.1 |
| | | | /PUBLIC |

¹ Values in brackets represent net expenditure.

PUBLIC CONSULTATION

14. We consulted the Tuen Mun District Council (TMDC) and its Environmental, Hygiene and District Development Committee (EHDDC) on 5 November 2002 and 17 September 2004 respectively for establishment of the fill banks cum sorting facility at Tuen Mun Area 38. Members supported in principle the implementation of the proposed works provided that the proposed works would not affect the proposed Eco-Park Project on the same site and that the TMDC and EHDDC would be briefed on the progress regularly.

15. We consulted the Sai Kung District Council on 11 June 2002 and 1 June 2004 on the establishment of the fill bank cum sorting facility at Tseung Kwan O and the operation until 2008. Members supported the implementation of the proposed works.

16. On 28 April 2004 and 25 November 2004, the Legislative Council Bills Committee and the Subcommittee for vetting the related legislation invited deputations from the trades and professional bodies during the legislative process. Trade representatives had no objection to the provision of the proposed sorting facilities.

17. The LegCo Panel on Environmental Affairs was consulted on the proposed sorting facilities under the construction waste disposal charging scheme on 28 April 2003 and 24 November 2003. We circulated again an information paper for the panel meeting on 30 May 2005. Members raised no adverse comments.

ENVIRONMENTAL IMPLICATIONS

18. At both Tseung Kwan O Area 137 and Tuen Mun Area 38, the fill bank and sorting facility are adjoining facilities both managed by the Civil Engineering and Development Department. The environmental assessments for the fill banks concluded that environmental impact from the sorting facilities could be controlled to within established guidelines and standards. We would implement necessary measures to mitigate any environmental impact to the vicinity. We estimate the cost of implementing the environmental monitoring and mitigation measures, including installation of wheel-washing facility and water spraying system, for the proposed sorting facilities to be \$1.5 million. We have included this cost in the project estimate.

19. We have given due consideration to the need to minimise generation of construction and demolition (C&D) materials in the planning and design stages. To minimise the generation of C&D materials, we will encourage the contractor to use suitable excavated materials for filling within the site to minimise off-site disposal and prefabricated elements for construction of structures to reduce C&D waste such as used temporary formwork.

20. We will require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. We will ensure that the construction works on site comply with the approved WMP. We will implement a trip-ticket system to control the proper disposal of C&D material and C&D waste to designated public fill reception facilities and landfills respectively. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

21. We estimate that the project will generate about 400 cubic metres (m³) of C&D material. Of these, we will reuse about 360 m³ (90%) as fill in public fill reception facilities and dispose of about 40 m³ (10%) at landfills. The notional cost of accommodating the construction waste at landfills is estimated to be \$5,000 for the project (based on a notional unit cost² of \$125/m³).

LAND ACQUISITION

22. The proposed construction waste sorting facilities do not require any land acquisition.

BACKGROUND INFORMATION

23. We included **33CG** in Category B in 2002.

/24.

² This estimate has taken into account the cost of developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/m³), nor the cost to provide new landfills (which are likely to be more expensive) when the existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.

24. We have substantially completed the design of the proposed construction waste sorting facilities by using in-house resources. We plan to commence the construction in August 2005 for commissioning of the proposed facilities in October 2005. We will deploy in-house resources to supervise the construction works.

25. The proposed works will involve removal of 25 trees in Tuen Mun Area 38 for transplanting elsewhere and will not remove any tree in Tseung Kwan O Area 137. All trees to be removed and transplanted are not important trees³.

26. We estimate that the proposed works will create about 90 jobs (78 for labourers and another 12 for professional/technical staff) providing a total employment of 1 050 man-months.

Environment, Transport and Works Bureau
June 2005

³ Important trees include trees on the Register of Old and Valuable Trees and any other trees which meet one or more of the following criteria –

- (a) trees over 100 years old;
- (b) trees of cultural, historical or memorable significance;
- (c) trees of precious or rare species;
- (d) trees of outstanding form; or
- (e) trees with trunk diameter exceeding one metre (measured at one metre above ground level).

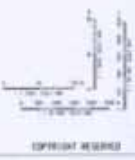


PROPOSED TEMPORARY CONSTRUCTION WASTE SORTING FACILITY
 擬建臨時建築廢物篩選分類設施



| | |
|--|--------------|
| PROJECT No. | CE 0004/12 |
| CLIENT | SD 01/004/05 |
| PROJECT No. | 001/12 |
| DATE | |
| TEMPORARY CONSTRUCTION WASTE SORTING FACILITIES AT TSEUNG KWAN O AREA 137 AND TIEN MUN AREA 36 將軍澳第137區及田灣第36區臨時建築廢物篩選分類設施 | |
| TEMPORARY SORTING FACILITY AT TSEUNG KWAN O AREA 137 - GENERAL LAYOUT 將軍澳第137區臨時篩選分類設施 概略圖 | |
| DRAWING No. | SF1001 |
| CIVIL ENGINEERING DIVISION CIVIL ENGINEERING OFFICE CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT HONG KONG | |

ENCLOSURE 1 (SHEET 1 OF 2)





EXISTING FILL BANK
現有堆料場

FIXED TRADE
TERMINAL
內河貨運碼頭

PROPOSED TEMPORARY CONSTRUCTION
WASTE SORTING FACILITY
擬建臨時建築廢物臨時分類設施

PROPOSED DATE
擬定日期

KEY PLAN 索引圖

| | |
|---|----------------|
| PROJECT NO. | 2012/0001/12 |
| SITE NO. | 246 (PLOT 246) |
| PROJECT NO. | 2012/12 |
| DATE | |
| TEMPORARY CONSTRUCTION WASTE SORTING FACILITIES AT TSEUNG KWAN O AREA 137 AND TUN MUN AREA 3B 將軍澳第137區及屯門第3B區臨時建築廢物臨時分類設施 | |
| TEMPORARY SORTING FACILITY AT TUN MUN AREA 3B - GENERAL LAYOUT 屯門第3B區臨時分類設施一般佈局 分劃圖紙 - 總平面圖 | |
| PROJECT NO. | SF1002 |
| FULL AMBLEMENT DIVISION CIVIL ENGINEERING OFFICE | |
| CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT HONG KONG | |

ENCLOSURE 1 | SHEET 2 OF 21