

**For discussion
on 28 March 2017**

Legislative Council Panel on Development

356WF – Uprating of Tung Chung Fresh Water Supply System

PURPOSE

This paper brief Members on the proposal to upgrade **356WF**, entitled “**Uprating of Tung Chung Fresh Water Supply System**”, to Category A at an estimated cost of \$300.2 million in money-of-the-day (MOD) prices to carry out uprating works for the Tung Chung fresh water supply system to cope with the anticipated increase in fresh water demand in Tung Chung and enhance the reliability of the existing system.

PROJECT SCOPE

2. The scope of works under **356WF** comprises –
 - (a) construction of Tung Chung No.2 fresh water service reservoir with a capacity of 40 000 cubic metres (m³); and
 - (b) associated geotechnical works, landscaping works and water main connection works¹.

— A layout plan showing the proposed works is at **Enclosure 1**.

3. Subject to the funding approval of the Finance Committee (FC), we plan to commence the proposed works in the third quarter of 2017 for completion in the second quarter of 2020.

JUSTIFICATION

4. The existing Tung Chung fresh water service reservoir supplying to Tung Chung New Town and the Hong Kong International Airport has a storage capacity of 41 700 m³. In order to cope with the increasing water demand arising from the proposed housing and commercial developments in Tung Chung New Town in 2020 and enhance the reliability of the existing system, we propose to construct a new service reservoir with a storage capacity of 40 000 m³. Upon

¹ The water main connection works refer to the works for connecting the proposed Tung Chung No. 2 fresh water service reservoir to the inlet and outlet pipes of the existing Tung Chung fresh water service reservoir.

completion of the proposed works in 2020, the total storage capacity of Tung Chung and Tung Chung No.2 fresh water service reservoirs will be increased to 81 700 m³ and would be able to meet the projected daily demand of about 80 600 m³ per day in 2020.

FINANCIAL IMPLICATIONS

5. We estimate the cost of the proposed works to be \$300.2 million in MOD prices.

6. While the construction of the proposed works will be supervised by in-house staff, we plan to engage consultants to provide advisory services for New Engineering Contract² administration for the project.

PUBLIC CONSULTATION

7. We consulted the Islands District Council on 20 February 2017. Members supported the proposed works.

ENVIRONMENTAL IMPLICATIONS

8. Although this is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499), we have carried out a Preliminary Environmental Review (PER) which concluded that the project would not have any long-term environmental impacts. We will incorporate the mitigation measures recommended in the PER into the works contract to control the environmental impacts arising from the construction works to within established standards and guidelines. These measures include frequent watering of the site, provision of wheel-washing facilities, covering of materials on trucks and use of silenced construction plant. We have included in the project estimate the cost for the implementation of the environmental mitigation measures.

9. At the planning and design stages, we have optimised the design and layouts to reduce the generation of construction waste. In addition, we will require the contractor to reuse inert construction waste (e.g. demolished concrete and excavated soil and rock) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste to public fill reception facilities³. We will encourage the contractor to maximise the use

² New Engineering Contract is a suite of contracts developed by the Institution of Civil Engineer, United Kingdom. It is a contract form that emphasises cooperation, mutual trust and collaborative risk management between contracting parties.

³ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

10. At the construction stage, we will require the contractor to submit a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste, for approval. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will also control the disposal of inert and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

11. We estimate that the proposed works will generate in total 86 700 tonnes of construction waste. Of these, we will reuse 8 500 tonnes (10%) of inert construction waste on site and deliver 73 560 tonnes (85%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 4 640 tonnes (5%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfills is estimated to be \$6.2 million for this project (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation).

HERITAGE IMPLICATIONS

12. The proposed works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites or buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

13. The proposed works do not involve resumption of private land.

TRAFFIC IMPLICATIONS

14. We have carried out a traffic review for the proposed works. It concluded that the proposed works would not cause any significant impact on the traffic during the construction and operation stages.

BACKGROUND

15. We upgraded **356WF** to Category B in September 2014.
16. In September 2015, we had engaged contractors to carry out ground investigation and engaged consultants to undertake the landscape design for the proposed works at an estimated cost of \$2.5 million in MOD prices. We have charged this amount to block allocation **Subhead 9100WX** “Waterworks, studies and investigations for items in Category D of the Public Works Programme”.
17. We have substantially completed the detailed design of the proposed works using in-house resources.
18. Of the 614 trees within the project boundary, 66 trees will be preserved and 548 trees will be felled. All trees to be removed are not important trees⁴. We will incorporate planting proposals as part of the project, including estimated quantities of 348 trees and 5 944 square metres of grassed area.
19. We estimate that the proposed works will create about 100 jobs (90 for labourers and 10 for professional or technical staff) providing a total employment of 3 000 man-months.

WAY FORWARD

20. We will seek support of the Public Works Subcommittee for the approval from the FC to upgrade 356WF to Category A and will invite tenders in parallel to enable early commencement of the proposed works. We will only award the contract after obtaining FC’s funding approval.

Development Bureau
Water Supplies Department
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4 “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria-

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument, and trees in memory of important persons or events;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 m (measured at 1.3 m above ground level), or with height or canopy spread equal or exceeding 25 m.



工務計劃項目第 356WF 號 -- 東涌食水系統提升工程
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