

**For discussion  
on 27 October 2020**

## **Legislative Council Panel on Development**

### **Investigation study, design and site investigation of Ngau Tam Mei Water Treatment Works extension**

#### **PURPOSE**

This paper briefs Members on our proposal to upgrade part of **371WF**, entitled “Ngau Tam Mei Water Treatment Works extension” (the Project), to Category A at an estimated cost of \$136.6 million in money-of-the-day (MOD) prices for the engagement of consultants to carry out the investigation study, design and associated site investigation works for Ngau Tam Mei Water Treatment Works (NTM WTW) extension.

#### **PROJECT SCOPE**

2. The part of **371WF** which we propose to upgrade to Category A comprises:-
  - (a) detailed study on the water treatment process and operation of the NTM WTW and its raw water transfer and fresh water distribution facilities to cater for the proposed increase in the output of the NTM WTW;
  - (b) impact assessment on environmental, traffic, geotechnical, drainage and hydraulic aspects and other relevant assessments;
  - (c) detailed design for the proposed extension of the NTM WTW, the extension of the Ngau Tam Mei fresh water primary service reservoir, laying of fresh water trunk mains, the modification of the existing raw water tunnel junction and other associated works including engineering, environmental mitigation and landscaping works;

- (d) associated site investigation works and supervision; and
- (e) preparation of tender documents and assessment of tenders for the associated site investigation works and the future construction works for the Project.

—— A location plan of the Project is at **Enclosure 1**.

3. We plan to engage consultants to carry out the investigation study, design and associated site investigation works upon obtaining funding approval from the Finance Committee (FC) for completion in around three and a half years.

4. We will retain the remainder of **371WF** in Category B, which mainly comprises the construction of the proposed works described in paragraph 2(c) above. We will seek funding for the remainder of **371WF** at a later stage.

## **JUSTIFICATION**

5. The NTM WTW was commissioned in 2000 with water treatment capacity at 230 000 cubic metres (m<sup>3</sup>) per day to provide reliable fresh water supply to areas including Yuen Long, Tin Shui Wai, Hung Shui Kiu, Ping Shan, Ngau Tam Mei, San Tin and Mai Po. We have reserved land for future extension during initial planning of the NTM WTW. Facilities built under the NTM WTW and reserved area for extension are shown in **Enclosure 2**.

6. Subsequent to the launching of planned development in Yuen Long area, including the development areas in Yuen Long South (Stages 1 & 2), Stages 1 & 2 of Hung Shui Kiu/Ha Tsuen, Wang Chau, Tan Kwai Tsuen and Long Bin, the NTM WTW would not be able to cope with the increase in water demand by 2028. In view of this, we propose to implement the Project to expand the water treatment capacity of the NTM WTW to 440 000 m<sup>3</sup> per day, to modify the existing raw water tunnel junction and to increase correspondingly the capacity of the associated fresh water supply system.

7. To meet the programme of the above-mentioned development proposals, we need to commence the investigation study, design and associated site investigation works for the Project in the second quarter of 2021 for completion by the third quarter of 2024. We propose to engage consultants to undertake the proposed investigation study and design, as well as to supervise the associated site investigation works.

## **FINANCIAL IMPLICATIONS**

8. We estimate the cost of the proposed investigation study, design and site investigation works to be \$136.6 million in MOD prices.

## **PUBLIC CONSULTATION**

9. We consulted the Housing, Town Planning and Development Committee of the Yuen Long District Council on 29 April 2020 on the proposed investigation study, design and associated site investigation works. Members in general supported the proposal.

## **ENVIRONMENTAL IMPLICATIONS**

10. The proposed investigation study and design is not a designated project under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499). We will avoid environmentally sensitive area for the site investigation works. However, if it is found later that additional site investigation works fall within the environmentally sensitive area, such works may become a designated project and if affirmative, we shall follow the statutory procedure under the EIAO to obtain an environmental permit before commencement of the site investigation works. Suitable mitigation measures will be implemented to control short-term environmental impact arising from the site investigation works.

11. The Project is a designated project under Schedule 2 of the EIAO, which requires an environmental permit for its construction and operation. An Environmental Impact Assessment (EIA) Study Brief for the Project has been issued under the EIAO<sup>1</sup>. We will carry out an EIA study as a part of the investigation study accordingly.

12. The proposed site investigation works will only generate very little construction waste. We will require the consultants to fully consider measures to minimise generation of construction waste and to reuse or recycle construction waste as much as possible in the future implementation of the Project.

### **HERITAGE IMPLICATIONS**

13. The proposed investigation study, design and associated site investigation 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**

14. The proposed investigation study, design and site investigation works will not require any land acquisition.

### **TRAFFIC IMPLICATIONS**

15. The proposed investigation study, design and associated site investigation works will not have significant impact on traffic.

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<sup>1</sup> Reference No. under the EIAO: ESB-333/2020

## **BACKGROUND**

16. In view of the potential development and thus anticipated water demand increase in the Yuen Long area, we carried out a feasibility study in 2018 for upgrading the NTM WTW from a water treatment capacity of 230 000 m<sup>3</sup> to 440 000 m<sup>3</sup> per day. The feasibility study was funded by block allocation **Subhead 9100WX** “Waterworks, studies and investigations for items in Category D of the Public Works Programme” at a total cost of \$6.0 million in MOD prices.

17. We upgraded **371WF** to Category B in October 2019.

18. The proposed investigation study, design and associated site investigation works will not involve any tree removal or planting proposals. We will require the consultants to take into consideration the need for tree preservation during the planning and design stages of the Project. We will also incorporate tree planting proposals, where possible, in the construction phase in the future.

## **WAY FORWARD**

19. We will seek support of the Public Works Subcommittee for the approval from the FC to upgrade part of **371WF** to Category A and will invite tenders in parallel to enable early commencement of the proposed investigation study, design and the associated site investigation works. We will only award the contract after obtaining FC’s approval.

**Development Bureau**  
**Water Supplies Department**  
**October 2020**

840 000N

820 000E

830 000E

830 000N



天水圍  
TIN SHUI WAI

屏山  
PING SHAN

元朗  
YUEN LONG

牛潭尾  
NGAU TAM MEI

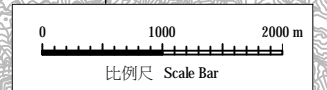
錦田  
KAM TIN

擬擴建牛潭尾濾水廠  
PROPOSED EXTENSION OF  
NGAU TAM MEI  
WATER TREATMENT WORKS

擬改善原水輸水隧道匯合處  
PROPOSED IMPROVEMENT OF  
RAW WATER TUNNEL JUNCTION  
(CHAMBER 'G')

擬擴建牛潭尾食水主配水庫  
PROPOSED EXTENSION OF NGAU TAM MEI  
FRESH WATER PRIMARY SERVICE RESERVOIR

擬敷設主食水管  
PROPOSED LAYING OF FRESH WATER  
TRUNK MAIN



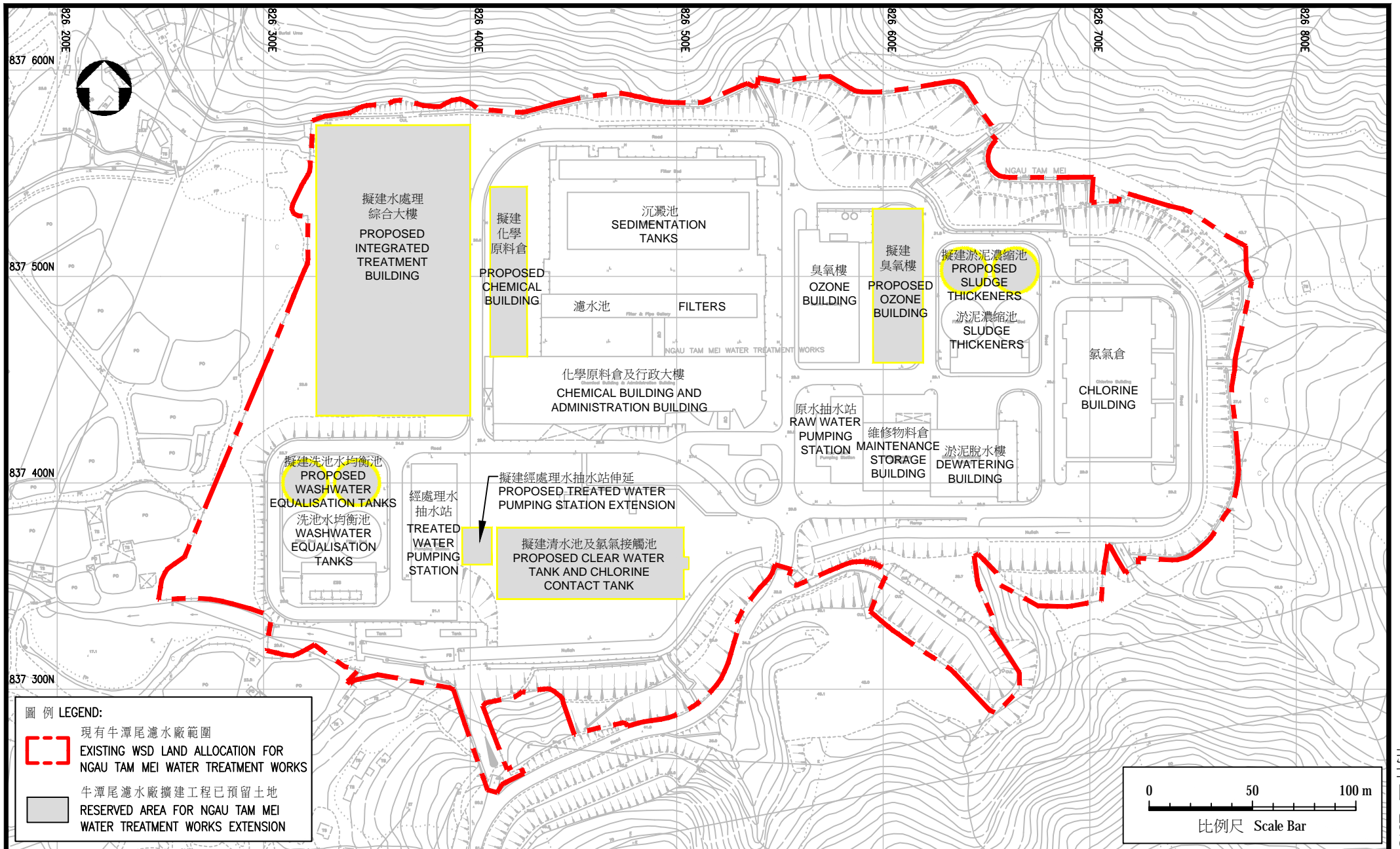
牛潭尾濾水廠擴展工程  
NGAU TAM MEI WATER TREATMENT WORKS EXTENSION  
建議擴展工程項目  
PROPOSED WORKS ITEMS



水務署  
Water Supplies Department

草圖編號  
SKETCH NO.

SK 52021 / 3



牛潭尾濾水廠擴展工程  
NGAU TAM MEI WATER TREATMENT WORKS EXTENSION

現有牛潭尾濾水廠建築及已預留土地  
EXISTING NGAU TAM MEI WATER TREATMENT WORKS AND RESERVED AREA FOR EXTENSION



草圖編號  
SKETCH NO. SK 52021 / 1