

For information**Legislative Council Panel on Development****334WF – Expansion of Tai Po water treatment works
and ancillary raw water and fresh water transfer facilities****PURPOSE**

This paper briefs Members on the proposal to part-upgrade **334WF** to Category A, entitled “Expansion of Tai Po water treatment works and ancillary raw water and fresh water transfer facilities – design and site investigation”, at an estimated cost of \$43.3 million in money-of-the-day (MOD) prices, for engaging consultants to carry out design and site investigation for the works.

PROPOSAL

2. The scope of works under **334WF** comprises the following –
 - (a) upgrading the existing facilities and constructing additional water treatment components at Tai Po Water Treatment Works (WTW) to increase its capacity from 250 000 cubic metres per day (m³/day) to 800 000 m³/day;
 - (b) increasing the capacities of two existing pumping stations at Tai Po to match the increased capacity of Tai Po WTW;
 - (c) increasing the storage capacity of the existing Butterfly Valley service reservoir in Kwai Tsing from 40 000 m³ to 120 000 m³; and
 - (d) laying of about 900 metres new fresh water mains with diameters ranging from 1 200 millimetres (mm) to 1 800 mm in Sham Shui Po and Kowloon City.

— The locations of the proposed works are shown on the plan at **Enclosure 1**. The proposed mainlaying works and the general layout of Tai Po WTW are at **Enclosures 2 and 3** respectively.

3. We plan to commence construction of the proposed works under separate contracts. The first construction contract which is planned to commence in February 2010 is for the supply and installation of electrical and mechanical plant and equipment in Tai Po WTW. To meet this programme, we propose to engage consultants in June 2009 to carry out design for the project. The scope of the proposed consultancy includes –

- (a) review of the study findings of the investigation stage of the project;
- (b) impact assessments on environment, traffic and other aspects necessary for completion of the design;
- (c) design of the works described in paragraph 2 above; and
- (d) supervision of site investigation and construction works.

JUSTIFICATION

4. Sha Tin WTW is the largest WTW in Hong Kong. It has reached a stage of requiring substantial reprovisioning as its plant and equipment are approaching the end of their service life. A major constraint in the in-situ reprovisioning of Sha Tin WTW is the difficulties to maintain the plant in operation during the reprovisioning process. In order to reduce the risk that the supply of treated water would be interrupted by the reprovisioning work, we have formulated a strategy by making use of the reserved capacity of Tai Po WTW.

5. At present, Sha Tin WTW and Tai Po WTW supply about 1 060 000 m³/day and 250 000 m³/day of treated water respectively. Under the strategy, we will upgrade Tai Po WTW and the associated transfer facilities in phases to increase its capacity from 250 000 m³/day to 800 000 m³/day. This will enable Tai Po WTW to extend its supply zone to cover part of urban Kowloon, and the entire Hong Kong Central and Western districts, which are currently supplied by Sha Tin WTW. The arrangement can effectively reduce the risk of interruption of treated water supply to the public during reprovisioning of Sha Tin WTW.

6. We will seek funding separately for the reprovisioning of Sha Tin WTW under PWP item no. **181WF** - “In-situ reprovisioning of Sha Tin WTW” in due course. It is tentatively planned to reprovision Sha Tin WTW to a capacity of about 550 000 m³/day to cope with forecast demand. This will result in a more balanced configuration of the treatment and distribution network between Sha Tin WTW and Tai Po WTW, and will greatly enhance the overall reliability of water supply in Hong Kong in the long term.

7. As for the proposed mainlaying works in Sham Shui Po and Kowloon City, they are required to facilitate transfer of treated water between the supply zones of Sha Tin WTW and Tai Po WTW.

8. Owing to the lack of in-house resources and expertise to undertake the works described in paragraphs 3(a) – (d) above, we propose to engage consultants to carry out the work.

FINANCIAL IMPLICATIONS

9. We estimate the cost of the proposed consultancy and site investigation works to be \$43.3 million in MOD prices, made up as follows -

		\$ million
(a)	Consultants’ fees	36.5
(i)	Review of the findings of the investigation study	1.0
(ii)	Environmental and traffic impact assessments	1.0
(iii)	Design	34.2
(iv)	Supervision of site investigation works	0.3
(b)	Site investigation works	3.0

	\$ million
(c) Contingencies	3.8
Total	<hr/> 43.3 (in MOD prices) <hr/>

10. The proposed part-upgrading of **334WF** to Category A will not incur any recurrent expenditure.

ENVIRONMENTAL IMPLICATIONS

11. The proposed design consultancy and site investigation works are not designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The proposed design works will not cause any adverse environmental impacts. We shall implement suitable mitigation measures to control short-term environmental impacts from the site investigation works.

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

13. The proposed design consultancy and site investigation works will not involve any tree removal or planting proposals.

TRAFFIC IMPLICATIONS

14. The proposed design consultancy and site investigation works will not have significant impact on traffic.

PUBLIC CONSULTATION

15. We consulted the Tai Po Rural Committee and the Environment, Housing and Works Committee of the Tai Po District Council on 11 and 12 November 2008 respectively in respect of the proposed works at Tai Po WTW and at the two existing pumping stations. They supported the proposed works.

16. We consulted the Community Affairs Committee of the Kwai Tsing District Council on 9 December 2008 in respect the proposed works at the Butterfly Valley service reservoir. It supported the proposed works.

17. We consulted the Environment and Hygiene Committee of the Sham Shui Po District Council and the Housing and Infrastructure Committee of the Kowloon City District Council on 27 November 2008 and 11 December 2008 respectively in respect of the proposed mainlaying works in Sham Shui Po and Kowloon City. They supported the proposed works.

HERITAGE IMPLICATIONS

18. The proposed design consultancy and site investigation works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interest and Government historic sites identified by Antiquities and Monuments Office.

LAND ACQUISITION

19. The proposed design consultancy and site investigation works do not require any land acquisition.

BACKGROUND

20. On 23 October 2007, we submitted an information paper to the LegCo Panel on Development with regard to the strategy on reprovisioning of Sha Tin WTW.

21. We included **334WF** in Category B in November 2007. In June 2008, we engaged consultants to carry out the investigation study for the proposed works under **334WF** at a cost of about \$10.5 million. We have charged the amount under block allocation **Subhead 9100WX** “Waterworks, studies and investigations for items in Category D of the Public Works Programme”.

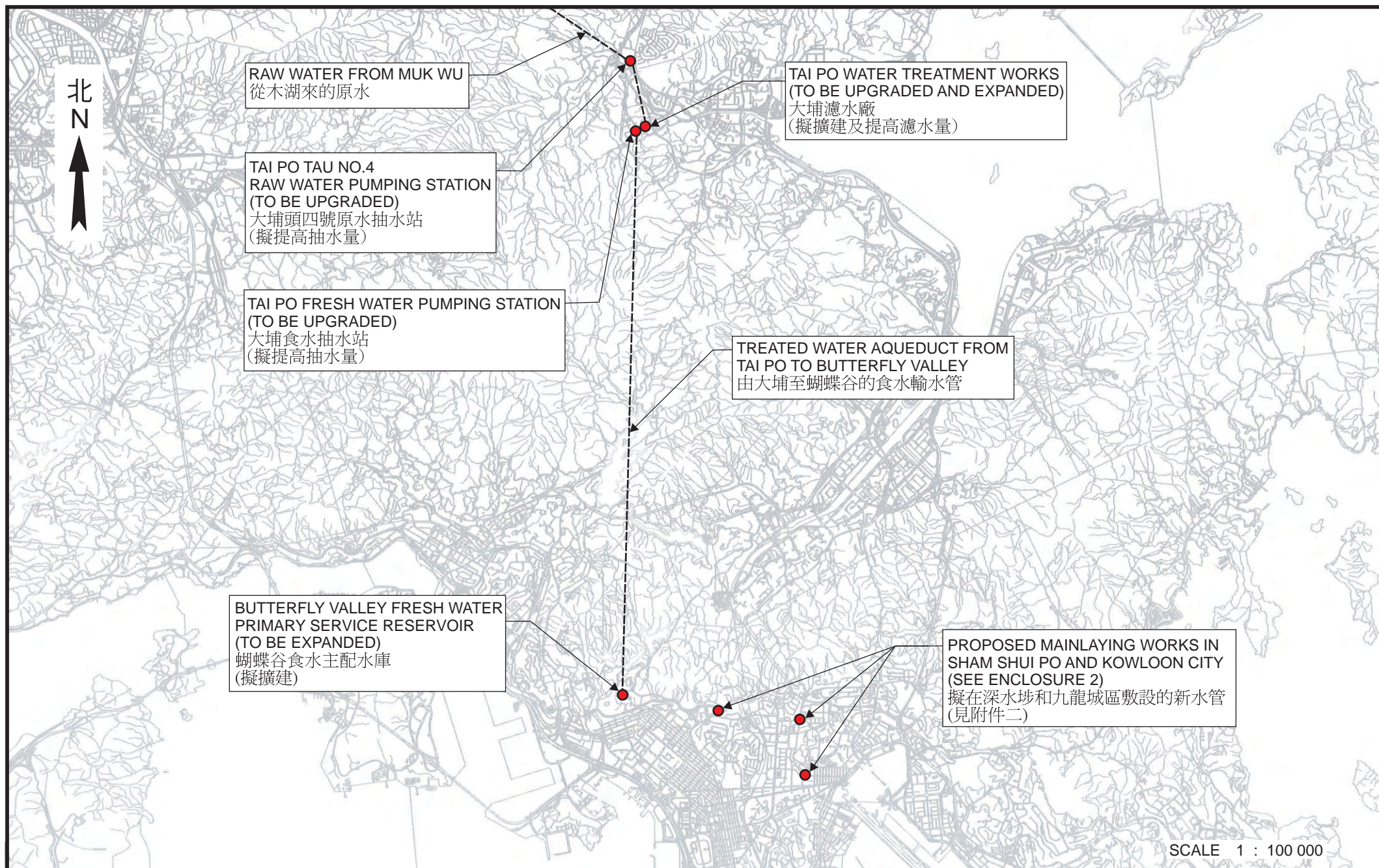
22. The investigation study has been substantially completed in March 2009. It has recommended an outline design scheme for Tai Po WTW and the associated transfer facilities for taking forward the design of the proposed works.

23. We estimate that the proposed design consultancy and associated site investigation works will create about 45 jobs (3 for labourers and another 42 for professional/technical staff) providing a total employment of 810 man-months.

WAY FORWARD

24. Members are invited to support the proposed part-upgrading of **334WF** to Category A for consideration by the Public Works Subcommittee in April 2009 and for funding approval by the Finance Committee in May 2009.

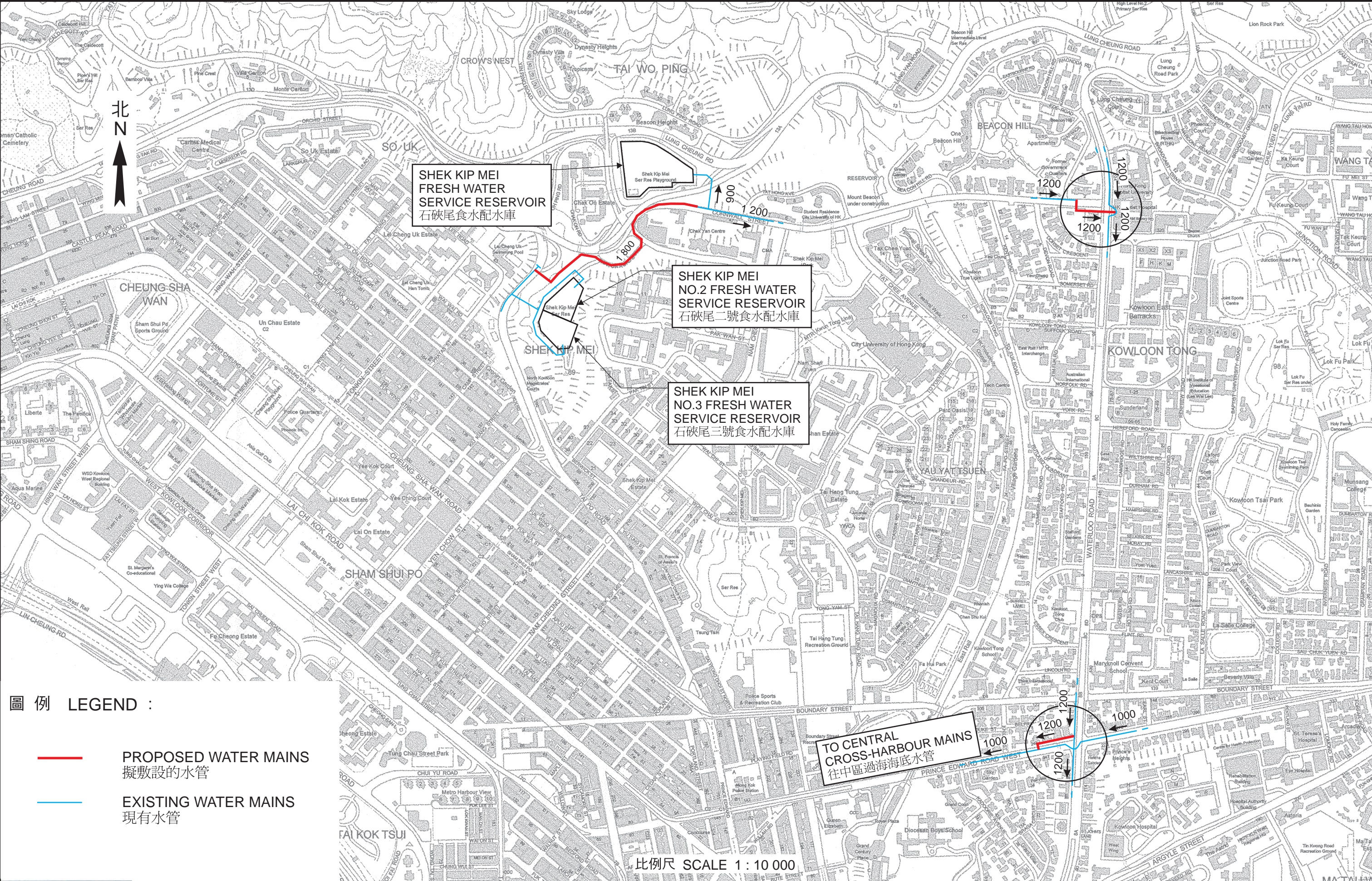
Development Bureau
March 2009



核准 APPROVED
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19/3/2009

工務計劃項目第334WF號 大埔濾水廠及附屬原水和食水輸送設施的擴展工程 - 位置圖
P.W.P. ITEM NO. 334WF - EXPANSION OF TAI PO WATER TREATMENT WORKS AND
ANCILLARY RAW WATER AND FRESH WATER TRANSFER FACILITIES - LOCATION PLAN
(甲級工程)
(CAT 'A' Submission)

水務署
WATER SUPPLIES DEPARTMENT
草圖編號
SKETCH NO. SK62008/503

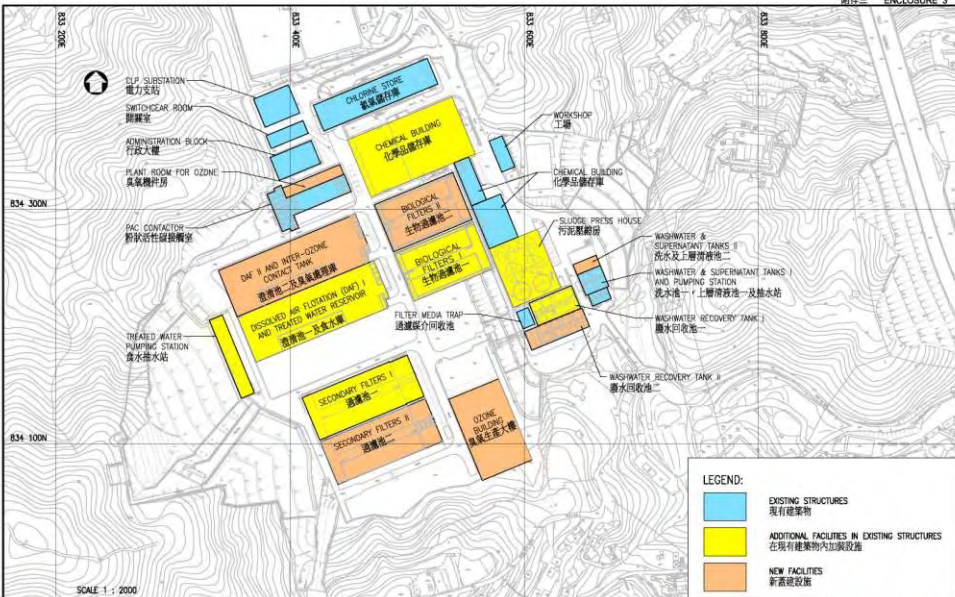


核准 APPROVED
總工程師/顧問工程管理
19/3 /2009

(甲級工程)
(CAT 'A' Submission)

工務計劃項目第334WF號 大埔濾水廠及附屬原水和食水輸送設施的擴展工程 - 擬在深水埗和九龍城區敷設的新水管
P.W.P. ITEM NO. 334WF - EXPANSION OF TAI PO WATER TREATMENT WORKS AND
ANCILLARY RAW WATER AND FRESH WATER TRANSFER FACILITIES - PROPOSED MAINLAYING WORKS IN SHAM SHUI PO AND KOWLOON CITY

水務署
WATER SUPPLIES DEPARTMENT
草圖編號
SKETCH NO. SK62008/504



DESIGNED BY: Kiewit
19/3/2009 (Preliminary Submission)

工務計劃項目第334WF號 - 大埔濾水廠及附屬原水和食水輸送設施的擴展工程 - 平面圖
P.W.P. ITEM NO. 334WF - EXPANSION OF TAI PO WATER TREATMENT WORKS AND ANCILLARY RAW WATER AND FRESH WATER TRANSFER FACILITIES - LAYOUT PLAN

水務署
Water Supply Department
SKETCH NO. SK62008/505