



**The Government of the Hong Kong Special Administrative Region
Water Supplies Department**

Agreement No. CE 13/2009 (WS)

**In-situ Reprovisioning of Sha Tin Water Treatment Works –
South Works – Design and Construction**

Project Profile

January 2011

AECOM

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1 BASIC INFORMATION

1.1 Project Title

- 1.1.1 In-situ Reprovisioning of Sha Tin Water Treatment Works – South Works (hereinafter referred to as the “Project”).

1.2 Purpose and Nature of the Project

- 1.2.1 The purpose of the Project is to reprovision the South Works of the existing largest water treatment facility in Hong Kong with a state-of-the-art treatment process to enable a more reliable water supply to the territory. Owing to the aging of plant and equipment of the existing Sha Tin Water Treatment Works (Sha Tin WTW) which are approaching the end of their service life, major renovation or replacement of existing facilities would be the only practicable and reliable means to reach its design capacity and meet anticipated future water needs.
- 1.2.2 The Sha Tin WTW was first commissioned in 1964 with an initial rated capacity of 364,000 m³/day which was known as the existing South Works. The extension works in several stages until 1983 to the nominal capacity 1,227,000 m³/day was collectively called the North Works. In order to maintain water supply to existing users, the operation of the North Works would be undisturbed during construction of the South Works. The Project is needed to continue provide adequate water supplies that will meet regulatory requirements, provide users with a reliable water supply, and keep pace with future water demand. In-situ reprovision has a much less significant environmental impact and is more cost-effective than finding a new site for reprovisioning. Sustainable design for the Project such as applying low carbon concept would be considered as far as practicable.
- 1.2.3 The key elements of the proposed works for the Project will include the following:
- (a) Demolition of the existing facilities of the South Works in phases;
 - (b) Reprovisioning of the South Works; and
 - (c) Construction of the new common facilities for both the North and the South Works.

1.3 Name of Project Proponent

- 1.3.1 Water Supplies Department (WSD)

1.4 Location and Scale of the Project

- 1.4.1 The proposed in-situ reprovisioning works under this Project will be located in the existing Sha Tin WTW. The locations of the proposed works are shown in **Figure 1.1**.
- 1.4.2 Existing major facilities of the South Works include:
- (i) South Clarifiers
After receiving the chemically dosed raw water from the South Works distribution channel, water is distributed to No.1-No.4 clarifiers via the distribution chamber. With the aid of the dissolved alum, the impurities in the water will coagulate into large particles which subsequently settle as sludge.
 - (ii) South Filters
The clarified water from the distribution chamber flows to the Filter Beds of South Works for removal of the more finely divided suspensions via the settled water channel located between south clarifier No.1 and 2.
 - (iii) South Clearwater Tank

The filtered water flows to the western end of the filter blocks and drops into the south clearwater tank underneath, where post-lime, post-chlorine are added to the water to disinfect, control the alkalinity of the final treated water. Fluoride is also dosed for dental protection. The treated water is then stored in the clear water tank.

(iv) South Pumping Station

There are 3 pump sumps in the south pumping station, two for clearwater and the remaining one for washwater.

1.4.3 The proposed major scope of works for the Project will comprise:

- Demolition of the existing facilities of the South Works in phases including south clarifier No.1-No.4, the associated filter beds, as well as the filtered water pumping station for the South Works; and common facilities for both the South and North Works including chemical house, alum saturator tanks, as well as the administration block and the Dangerous Goods (DGs) store;
- Reprovisioning of the South Works as mentioned in section 1.4.2 to the proposed reliable output of 550,000m³/day;
- Construction of the new common facilities for both the North and the South Works including an administration building, visitor facilities, regional laboratory (Mainland East laboratory), pre-treatment facilities, chemical house, switchgears and power supply, treated water pumping station, surge suppression facilities, and washwater recovery facilities;
- Cut-back of the existing man-made slope located west of the existing clarifiers for reprovisioning of chemical house and pre-treatment facilities where Incense Tree (*Aquilaria sinensis*) as listed under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) was identified;
- Construction of a new access road along the northern and western edges of the Filter Bed area of the North Works; and
- Provision of all other associated civil, geotechnical, mechanical and electrical works.

1.4.4 Due to the space constraints and shorten chemical delivery time, it is proposed to reprovision a chemical house to be placed in central site location that it will require cut-back of the slope. In-principle approval to cut-back the slope has been obtained from Sha Tin District Council for reprovisioning of chemical house and pre-treatment facilities.

1.4.5 The treatment process options would be developed to achieve the primary treatment goals of turbidity and organic removal, ammonia reduction, manganese removal, enhanced disinfection and reduced use of chlorine. Six options have been identified to meet the treatment goals, and two shortlisted treatment options are shown in **Figure 1.2**. The preferred treatment option and the possibilities of using alternative coagulants Poly Aluminum Chloride (PACl) in place of the presently use of alum will be determined in the detailed design stage.

1.5 Number and Type of Designated Project

1.5.1 The existing capacity of the Sha Tin WTW exceeds 100,000 m³/day as listed in Schedule 2 Part I Item E.2 of the Environmental Impact Assessment Ordinance (EIAO). Since this water treatment plant has been in operation before the EIAO effective on 1 April, 1998, it is therefore an exempted Designated Project (DP) under the EIAO. However, considering the proposed location for reprovisioning of chemical house that are likely to affect the protected species of the identified Incense Tree (*Aquilaria sinensis*), it would constitute material changes to the exempted project under Clause 5(10) of the EIAO.

1.6 Name and Telephone Number of Contact Person(s)

Water Supplies Department
Project Management Division
46/F Immigration Tower
7 Gloucester Road

Wanchai Hong Kong
Contact person: Mr. CHAN Tze Ho (Senior Engineer)
Telephone: 2829 4490
Fax: 2586 1696

2 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Project Implementation

- 2.1.1 WSD is the project proponent. WSD will carry out the design and construction supervision of the Project. WSD will operate and maintain the completed works.
- 2.1.2 Detailed design of the proposed reprovisioning works commenced in August 2010. Construction is tentatively scheduled to commence in mid 2012 for completion in 2016.

2.2 Potential Interfacing Projects Identified

- 2.2.1 Below is the potential project identified that would likely interface with this Project during the course of construction and/or operation phases:
- 51TR – Shatin to Central Link – design and site investigation

3 POSSIBLE IMPACTS ON THE ENVIRONMENT

3.1 Construction Phase

Air Quality

- 3.1.1 Dust nuisance would likely be the major air quality impact during construction. The predominant dust sources on site would be from construction activities such as demolition, excavation, material handling and vehicle movements on unpaved site areas. In view of the phasing of the works area and small work area, the dust impact is considered to be insignificant with the implementation of good site practice and dust suppression measures.
- 3.1.2 Asbestos is commonly used for heat insulation before the 1980's. Therefore it is likely that the existing building insulation materials contain asbestos.

Noise

- 3.1.3 Noise would be generated from construction activities such as site clearance/demolition works and construction of civil works by using powered mechanical equipment (PME). With the adoption of recommended mitigation measures, potential noise impact on the sensitive receivers is expected to be insignificant.

Water Quality

- 3.1.4 Construction site runoff and drainage arising from construction would likely be the major source causing water quality impact. In order to avoid the site runoff and drainage that may enter into the adjacent water course, mitigation measures through good site practices and standard pollution control measures would therefore be recommended.

Waste Management

- 3.1.5 Waste generated from the construction work may include construction and demolition (C&D) materials, general refuse from the site workforce, and chemical waste from any maintenance of construction plant and equipment. It is encouraged to reduce waste generation by reusing or recycling suitable C&D materials including management of excavated material and construction waste disposal. Given that the proposed works are properly phased and the standard waste management practices are to be strictly followed, adverse environmental impacts would not be anticipated during the construction works.

Ecology

- 3.1.6 Potential direct impact on the woodland area adjoining the existing man-made slope would be expected due to the proposed cut-back of hill/slope located west of the existing clarifiers for reprovisioning of chemical house. More than ten individuals of mature Incense Tree (*Aquilaria sinensis*) were identified on the slope. Incense Tree is listed under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586). Impact on this protected species and other existing trees would be minimised, and the total number of the affected trees would be kept to minimum as much as practicable. The feasibility, suitability and cost-effectiveness of transplanting the affected trees due to the Project would be carefully reviewed. As a last resort if tree felling is unavoidable, compensatory planting would therefore be recommended and the plan would be in consultation with relevant government departments including Planning Department (PlanD) and Agriculture, Fisheries and Conservation Department (AFCD).
- 3.1.7 Indirect ecological impacts during construction may include disturbance from noise, dust nuisance and human activities; and site runoff into the nearby stream if uncontrolled. However, by the implementation of effective mitigation measures such as good site practices, these potential impacts would be controlled to an acceptable level.

Hazard to Life

- 3.1.8 According to the EIA study brief (ESB-191/2008) for Shatin to Central Link – Tai Wai to Hung Hom Station by Mass Transit Railway Corporation (MTRC), hazard assessment as part of the EIA was required to carry out to evaluate potential hazard to life during construction and operation of a new Hin Keng station within the Consultation Zone of the Sha Tin WTW. This EIA study is ongoing at the time of writing this project profile in which the findings of the hazard assessment would be adopted.
- 3.1.9 The existing Chlorination House will be left untouched and protected at all times during construction. A Hazard and Operability (HAZOP) study will therefore be carried out during detailed design stage to select appropriate safety measures to ensure that likelihood of chlorine release will not be increased. Its findings and recommendations should be incorporated into the construction contracts. The risk should then be controlled through careful construction management measures.

Landscape and Visual

- 3.1.10 The reprovisioning work site would be visible mainly to the residents at the elevated levels of the nearby Hin Keng Estate. Demolition of buildings and structures; excavation works and the proposed cut-back of existing man-made slope within the site would be inevitable. Short-term visual disturbance is therefore expected during construction.

Cultural Heritage

- 3.1.11 There is no declared monument or graded historical building in the area of Sha Tin WTW. The nearest three identified historical buildings namely Yeung, Law and So Ancestral Hall (Grade 3), Hin Tin in Sha Tin are rather distant from the proposed work site. In addition, an identified grave site is located outside the proposed works area. No adverse cultural heritage impact is therefore anticipated during construction and operation of the Project.

Land Contamination

- 3.1.12 It is proposed to relocate the existing chemical house to allow the space to be used for the South Works reprovisioning. The land use for this chemical house involves storage of predominately dry chemicals including powdered activated carbon (PAC), alum and lime, and tanks for saturation which are located in the lower or basement areas; and the chemicals to be used are not listed as chemicals of concern under the Risk-Based Remediation Goals (RBRGs). Potential to cause land contamination is therefore not anticipated.

3.2 Operation Phase

- 3.2.1 The proposed reprovisioning works would unlikely cause air and water quality and ecological impact when operated. The works area would be restored upon the completion of construction work. Thus, environmental impacts arising from the proposed works during its operation phase are considered to be negligible.

Noise

- 3.2.2 The major noise sources during operation would likely be the new pumping stations including pump motors, exhaust fans for ventilation systems and emergency generator set (if required). However, the plant would be enclosed in the new pumping stations to minimise noise generated.

Waste

- 3.2.3 Sludge would be the major waste generated during operation of the water treatment process. Currently sludge is pumped to Sha Tin Sewage Treatment Works for further treatment before disposal. The future sludge disposal arrangement would likely follow the current practice. Despite this, liaison would be made with Drainage Services Department (DSD) and

Environmental Protection Department (EPD) on the long term sludge disposal strategy needs for Sha Tin WTW.

Hazard to Life

- 3.2.4 The existing Chlorination House and associated facilities would remain unchanged after the reprovisioning works. Based on the latest information available at the time of writing this Project Profile, the use of chlorine would be reduced. It is therefore anticipated that the risk associated with chlorine transportation and storage would be lower than that before the reprovisioning works.

Landscape and Visual

- 3.2.5 The future layout would be developed to well integrate the reprovisioning works into the existing natural landscape and the inclusion of attractive landscaping features. The reprovisioned facilities would therefore not consider to materially alter the baseline landscape conditions.

4 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

4.1 *Air and Noise and Water*

- 4.1.1 The proposed reprovisioning works will be located within the existing Sha Tin WTW site. **Figure 4.1** shows the surrounding environment of the Project. The existing and planned sensitive receivers in terms of air, noise and water are summarised in **Table 4.1** below.

Table 4.1 Representative Environmental Sensitive Receiver in the Vicinity of the Project

Description	Nature of Sensitive Receiver	Type of Sensitive Receiver ⁽ⁱ⁾
Hin Yau House, Hin Keng Estate	Residential	NSR and ASR
Hin Wan House, Hin Keng Estate	Residential	NSR and ASR
Hin Kwai House, Hin Keng Estate	Residential	NSR and ASR
Hin Fu House, Hin Keng Estate	Residential	NSR and ASR
Joy Villa	Residential	NSR and ASR
Jade Villa	Residential	NSR and ASR
Hung Lo	Residential	NSR and ASR
Angelaville	Residential	NSR and ASR
The Blossom	Residential	NSR and ASR
Nearby hill streams	-	WSR
Nearby nullah	-	WSR

Note:

(i) ASR: Air Sensitive Receiver. NSR: Noise Sensitive Receiver. WSR: Water Sensitive Receiver.

4.2 *Ecology*

- 4.2.1 The proposed reprovisioning works would be primarily restricted within the developed areas of the existing Sha Tin WTW site. The setting of the Sha Tin WTW is within the valley encompassing by mountains from three sides. Woodland is located on these hillsides where common tree species such as *Acronychia pedunculata*, *Carallia brachiata* and *Schefflera heptaphylla* are the dominant trees. On the east of the Sha Tin WTW are the developed residential areas of Hin Keng Estate and road network.
- 4.2.2 Three major watercourses are present within and in vicinity of Sha Tin WTW site (Refer to **Figure 4.1**). One watercourse, located north-west of the Sha Tin WTW, is flowing from west connecting to the existing nullah along the site boundary on the west of the clarifiers. Water in this watercourse comes up from the mountains, passing through the nullah and eventually going downside. The other two watercourses, flowing from south to north, are rather natural and located south-east of the Sha Tin WTW. They converge at the south eastern point of the site boundary. After merging, the watercourse within the WTW becomes channelized with concrete banks on both sides.

4.3 *Hazard to Life*

- 4.3.1 The population surrounding the Sha Tin WTW would be subject to the impact of chlorine gas in case of chlorine release. Potentially affected population is mainly composed of residential development including surrounding residential buildings and some recreational facilities.

4.4 *Landscape and Visual*

- 4.4.1 The frontage of the Sha Tin WTW is partially visually blocked by the elevated railway viaduct with massive noise reduction enclosure. The identified key visual sensitive receivers in the vicinity of the work sites include the following:
- Hin Kwai House, Hin Wan House, Hin Fu and Hin Yau House of Hing Keng Estate;
 - Joy Villa; and
 - Jade Villa

5 ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND FURTHER ENVIRONMENTAL IMPLICATIONS

5.1 Construction Phase

Air Quality

5.1.1 Dust generation during construction is expected to be insignificant with the implementation of dust suppression measures, as stipulated in the *Air Pollution Control (Construction Dust) Regulation of Air Pollution Control Ordinance* (APCO). And these measures should be incorporated into the specifications for the works contracts.

5.1.2 Under Part IX of APCO which provides a legislation control on the removal of asbestos-containing materials. In accordance with the APCO, the owner of the premises which contain, or are reasonably suspected of containing, asbestos-containing materials should employ a registered asbestos consultant to conduct an asbestos investigation and prepare an Asbestos Investigation Report (AIR). If suspected asbestos-containing material (ACM) is identified, an asbestos abatement plan should be submitted to EPD at least 28 days before the commencement of the asbestos abatement work.

Noise

5.1.3 Construction noise would be minimised by following *Noise Control Ordinance* (Chapter 400) (for Construction Industry) published by EPD, which includes:

- Only well-maintained plant should be operated on-site and the plant should be serviced regularly during the construction phase;
- Silencers or mufflers on construction equipment, if applicable, should be utilised and should be properly maintained;
- PME that may be in intermittent use should be shut down between work periods or throttled down to a minimum;
- Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and
- Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities.

Water Quality

5.1.4 To avoid potential water quality impact during the construction phase, guidelines stipulated in ProPECC PN 1/94 *Construction Site Drainage* should be properly followed to minimise site runoff, control erosion, and retain and reduce any suspended solids prior to discharge. Silt removal facilities should be provided and soil excavation work should be minimised on rainy days as far as practically. Apart from these, earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. The above measures would be incorporated into the specifications of the works contracts.

Waste Management

5.1.5 Waste management practices including the following control/mitigation measures are recommended during the construction phase. And these measures should be incorporated into the specifications for the works contracts.

- Provision of sufficient waste disposal points and regular collection for disposal;
- Different types of waste should be sorted and stored in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;
- Provision of appropriate measures to minimise wind-blown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;

- Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre;
- Any unused chemicals or those with remaining functional capacity shall be recycled; and
- Maximising the use of reusable steel formwork to reduce the amount of C&D materials. The excavated fill material shall be used on-site as backfill material as far as possible.

Ecology

5.1.6 To avoid or minimise potential ecological impacts during construction phase, the following good site practices and management would be adopted:

- The proposed reprovisioning works should be designed with a view to avoid the felling of trees and to avoid conflict with tree root development as far as possible;
- To take precautions against disturbance to trees, tree survey shall be carried out if necessary. All the trees regardless of their trunk diameters and heights shall be preserved and protected properly;
- No pruning or other type of cutting of trees may be undertaken without prior consultation with LCSD/AFCD;
- Standard good site practices (e.g. hoarding of works areas, placement of equipment or stockpile at designated area etc.) should be implemented in construction phase to minimise potential disturbance to off-site habitats and associated wildlife;
- Practical dust and noise control measures (e.g. regular watering and use of quiet mechanical plant etc.) should be implemented;
- Effective site run-off control measures (e.g. use of sand / silt traps etc.) should be provided during the construction phase to minimise impacts on adjacent water bodies; and
- All construction works adjacent to the streams should be carried out in dry season (from November to March) and suspended during heavy rainstorm as far as practicable.

Hazard to Life

5.1.7 To reduce the potential risk associated with the Chlorination House and chlorine transportation, the mitigation measures would be recommended as follows:

- Careful construction management measures on construction plants including establishment of a construction no-go zone, a no-go zone for overhead cranes taking into account the reach of its jib, installation of crash barriers around the Chlorination House and the provision of emergency plan for construction works; and
- HAZOP study to be carried out during the detailed design stage to identify specific hazards and corresponding safety measures.

Landscape and Visual

5.1.8 It is recommended to avoid unnecessary build-up of rubble and/or construction waste. Construction activities would be carried out in a neat and orderly manner. House-keeping would also be strictly implemented to ensure the operation of the existing treatment works that would not be adversely affected by flying debris.

5.2 Operation Phase

Hazard to Life

5.2.1 To reduce the potential risk associated with the chlorine delivery, storage and handling during operation, recommended mitigation measures are listed below:

- Enforcement of speed limit for all vehicles along the site access road;
- Installation of crash barrier along parts of the road where there are hazardous downward slopes; and
- Maintaining the same safety working procedures and level of training for staff working inside and around the Chlorination House

- Maintaining the chlorine storage time distribution as stipulated in the ongoing hazard assessment by MTRC.

Landscape and Visual

5.2.2 To reduce the potential visual impact associated with the reprovisioning works, recommended mitigation measures are listed below:

- Provision of the external faces and roof of the treatment facilities with special architectural treatment to blend in well with the surrounding environment;
- Provision of roof planting wherever appropriate; and
- Provision of a landscaped/planting strip along the site boundary as necessary

5.3 Summary of Potential Environmental Impacts and Mitigation Measures

5.3.1 The potential environmental impacts and proposed mitigation measures to be incorporated into the design and construction of the proposed reprovisioning works are summarised in **Table 5.1** below.

Table 5.1 Summary of Environmental Impacts and Mitigation Measures during Construction and Operation Phase

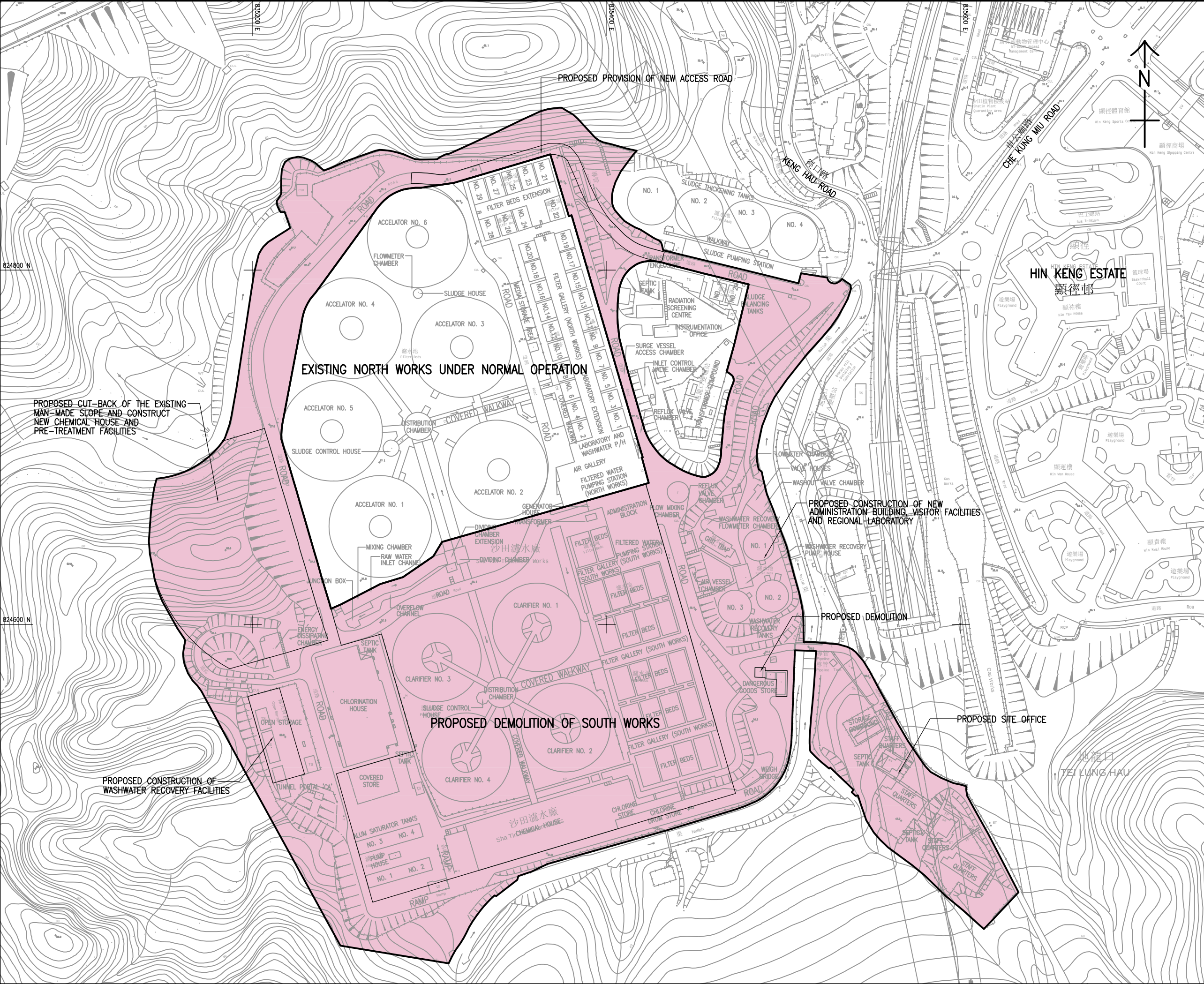
Potential Environmental Impact	Mitigation Measures	Relevant Section in the Project Profile
Air Quality	(1) Control measures stipulated in the Air Pollution Control (Construction Dust) Regulation; (2) Control by contract specifications; (3) Control work governed by Part IX of APCO	5.1.1 and 5.1.2
Noise	(1) Control measures stipulated in the Practice Note for Professional Persons: Noise from Construction Activities – Non-Statutory Controls (ProPECC PN 2/93)	5.1.3
Water Quality	(1) Control of construction surface run-off as stipulated in the measures stipulated in the ProPECC PN 1/94 (Construction Site Drainage); and (2) Control by contract specifications.	5.1.4
Waste Management	(1) C&D material and waste would be sorted on site; and (2) Control by contract specifications.	5.1.5
Ecology	(1) Process/Plant design with a view to avoid tree felling or conflict with tree root development; (2) Conduct of tree survey if necessary; (3) No pruning or other type of cutting of trees without prior consultation with LCSD/AFCD; (4) Standard good site practices, practical dust and noise control measures and effective site run-off control measures; and (5) Carrying out construction works adjacent to the streams in dry season and no working during heavy rainstorm.	5.1.6

Potential Environmental Impact	Mitigation Measures	Relevant Section in the Project Profile
Hazard to Life	(1) Careful construction management measures (2) HAZOP study (3) Vehicle speed limit (4) Crash barrier installation (5) Safety working procedures (6) Chlorine storage time distribution as stipulated in relevant hazard assessment	5.1.7 and 5.2.1
Landscape and Visual	(1) Avoidance of unnecessary rubble build-up and/or construction wastes (2) Good house-keeping (3) Special architectural treatment (4) Roof planting (5) Landscaped/planting strip	5.1.8 and 5.2.2

6 USE OF PREVIOUSLY APPROVED EIA REPORTS

- EIA-100/2004 Siu Ho Wan Water Treatment Works Extension (WSD);
- EIA022/1999 Sha Tin Sewage Treatment Works, Stage III Extension – EIA (DSD); and
- EIA-186/2010 Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works.

FIGURES



圖例:
LEGEND:

擬議工作範圍
PROPOSED WORKS AREA

REV	DESCRIPTION	BY	CHK	DATE
1	ISSUED FOR TENDER			

水務署
WATER SUPPLIES DEPARTMENT

合約編號 CE 13/2809 (WS)
沙田濾水廠原地重置工程 -
南廠設計及建造
AGREEMENT NO. CE 13/2009 (WS)
IN-SITU REPROVISIONING OF SHA TIN WATER TREATMENT WORKS -
SOUTH WORKS DESIGN AND CONSTRUCTION

位置圖
LOCATION PLAN

AECOM

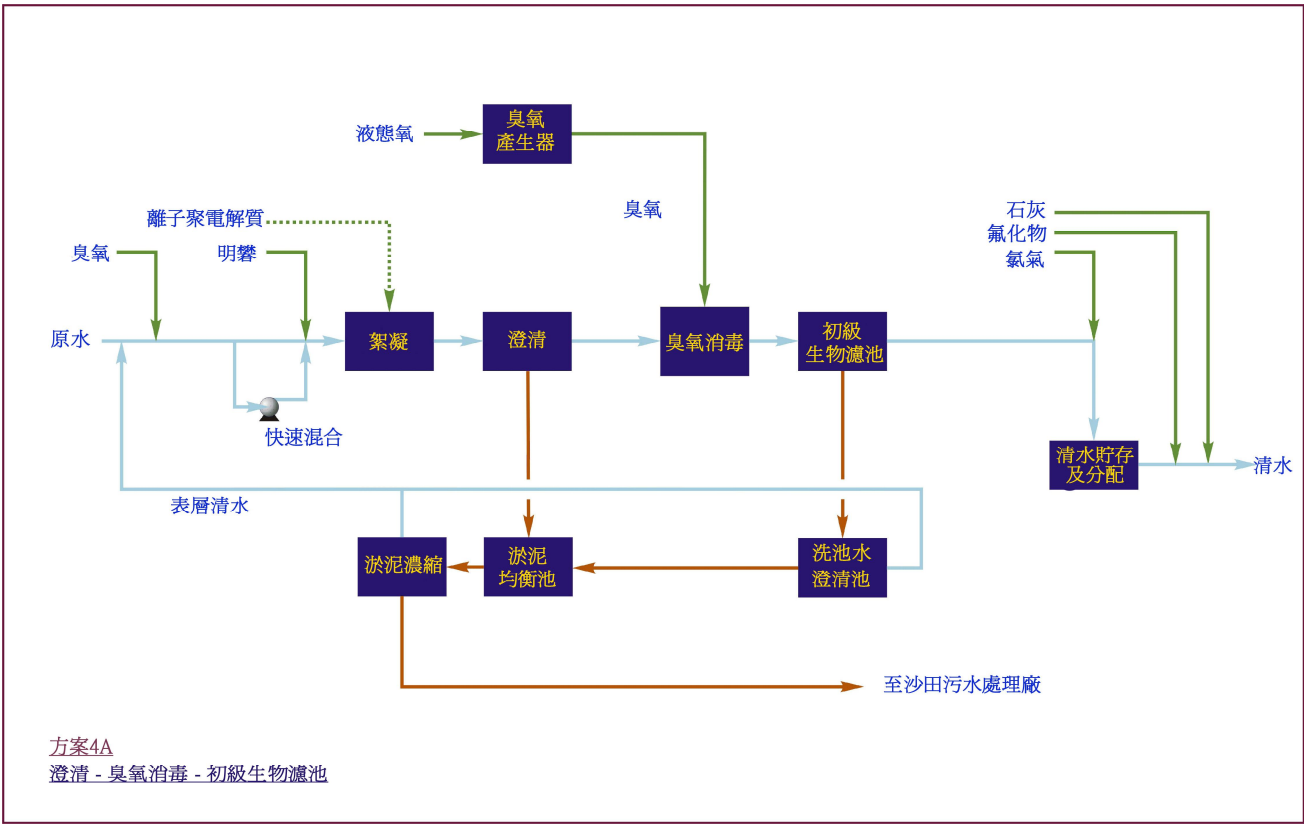
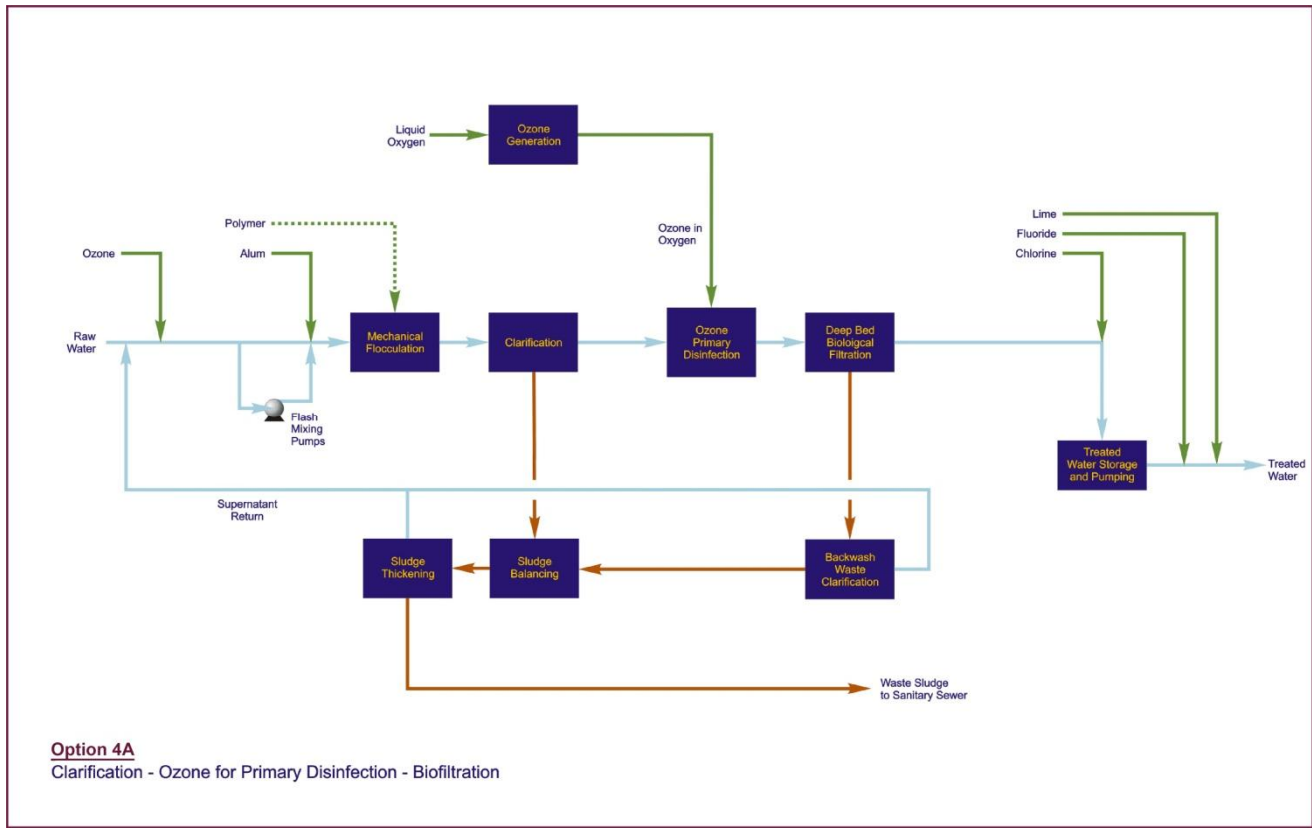
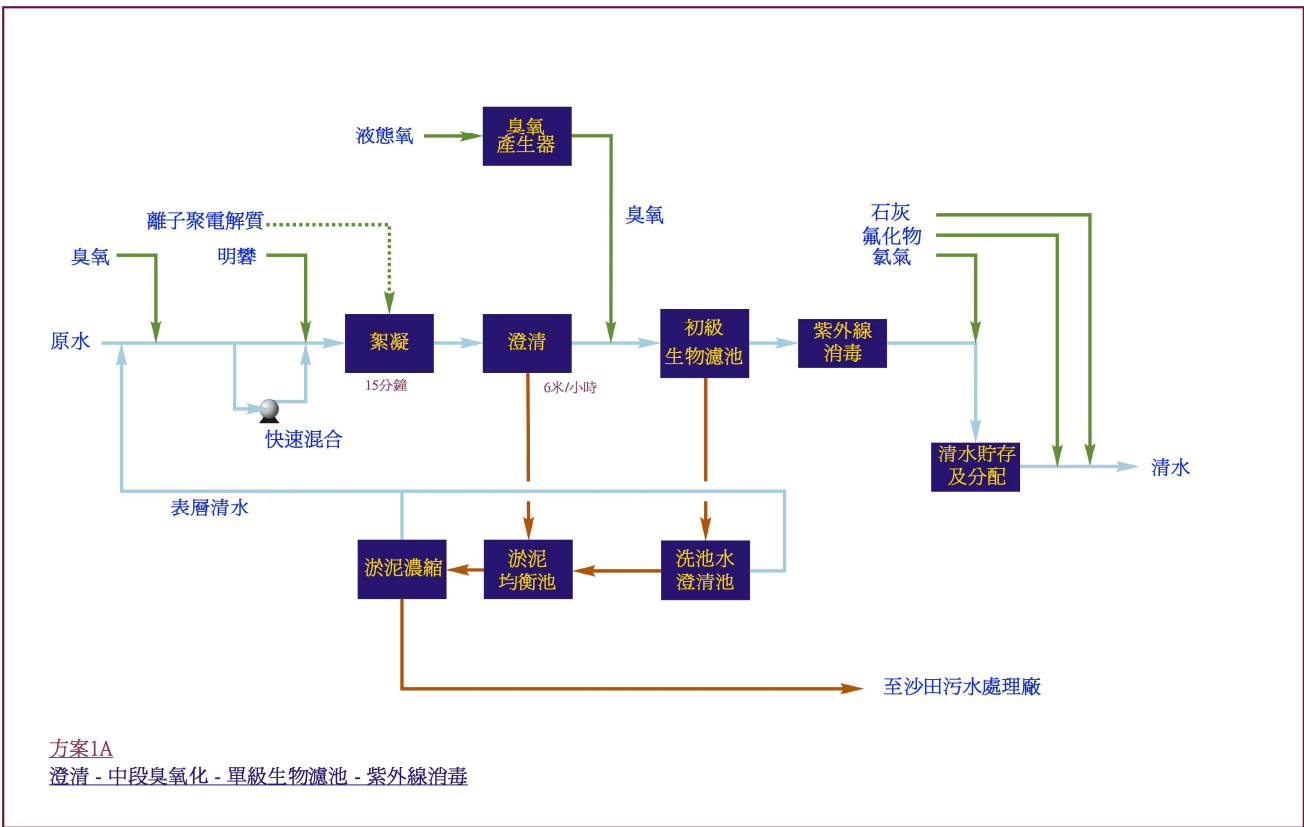
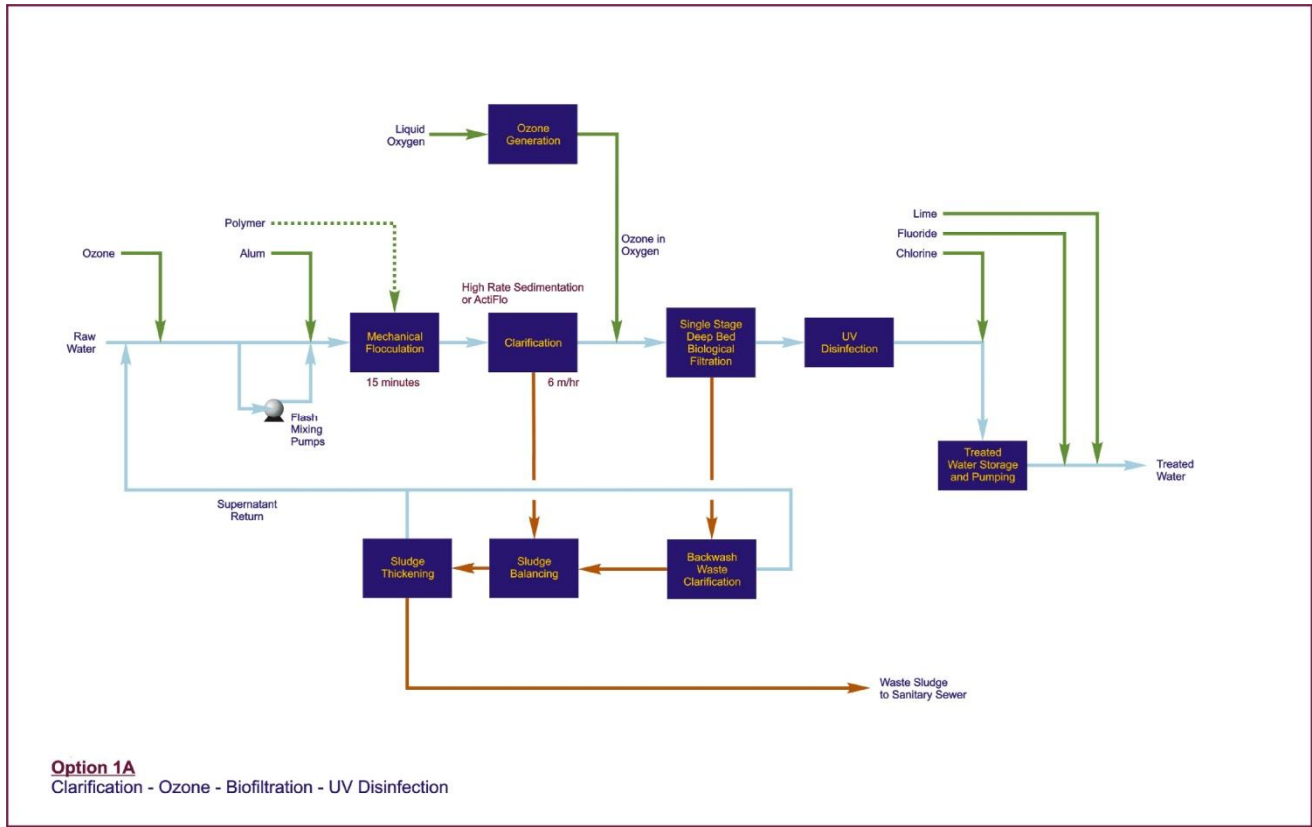
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圖紙編號

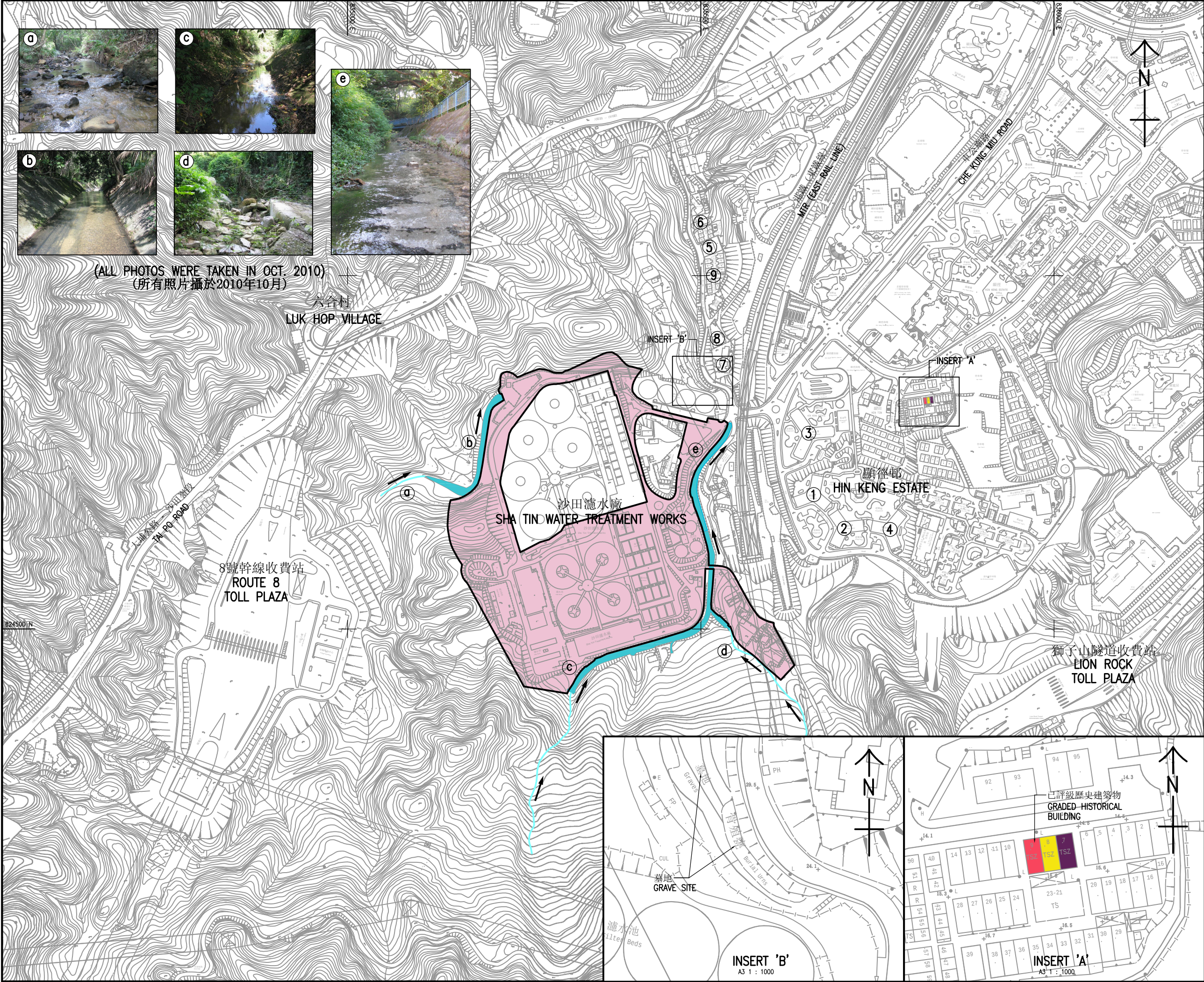
DESIGNED BY 設計	CONTRACT NO. 合約編號	P. NO. APPROVED 批准人
DRAWN BY 繪圖	SHEET 圖張	
SCALE 比例	DRAWINGS ARE IN 圖紙單位	
A3 1 : 2000	METRES	

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Figure 1.2 Preliminary Water Treatment Process Options

圖 1.2 預選食水處理方案





(ALL PHOTOS WERE TAKEN IN OCT. 2010)
(所有照片攝於2010年10月)

六合村
LUK HOP VILLAGE

8號幹線收費站
ROUTE 8
TOLL PLAZA

沙田濾水廠
SHA TIN WATER TREATMENT WORKS

顯徑邨
HIN KENG ESTATE

獅子山隧道收費站
LION ROCK
TOLL PLAZA

圖例:
LEGEND:



噪音和空氣敏感受體:
NOISE AND AIR
SENSITIVE RECEIVERS:

- 1 顯徑邨顯運樓
HIN WAN HOUSE, HIN KENG ESTATE
- 2 顯徑邨顯貴樓
HIN KWAI HOUSE, HIN KENG ESTATE
- 3 顯徑邨顯祐樓
HIN YAU HOUSE, HIN KENG ESTATE
- 4 顯徑邨顯富樓
HIN FU HOUSE, HIN KENG ESTATE
- 5 華莊
JOY VILLA
- 6 翠園
JADE VILLA
- 7 熊處
HUNG LO
- 8 ANGELAVILLE
- 9 桃花源
THE BLOSSOM

水敏感受體:
WATER SENSITIVE RECEIVER:



已評級歷史建築物:
GRADED HISTORICAL BUILDING:

- 蘇氏宗祠 (三級, 854號)
SO ANCESTRAL HALL
(GRADE III, NO. 854)
- 羅氏宗祠 (三級, 853號)
LAW ANCESTRAL HALL
(GRADE III, NO. 853)
- 楊氏宗祠 (三級, 852號)
YEUNG ANCESTRAL HALL
(GRADE III, NO. 852)

REV.	DESCRIPTION	DATE	BY	CHK.
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水務署
WATER SUPPLIES DEPARTMENT

合約編號 CE 13/2009 (WS)
沙田濾水廠原地重置工程 -
南廠設計及建造
AGREEMENT NO. CE 13/2009 (WS)
IN-SITU REPROVISIONING OF SHA TIN WATER TREATMENT WORKS -
SOUTH WORKS DESIGN AND CONSTRUCTION

主要環境敏感受體置圖
LOCATION OF THE KEY
ENVIRONMENTAL SENSITIVE
RECEIVERS

AECOM

DRG. NO. 60162073/PP/FIG 4.1
圖紙編號

DESIGNED BY 設計	CONTRACT NO. 合約編號	P. BY: APPROVED 批准人
DRAWN BY 繪圖	STATUS 圖況	
SCALE 比例尺 A3 1 : 5000	CONVERSIONS ARE IN 尺寸單位 METRES	COPYRIGHT RESERVED 版權所有