

# **Task Force on Kai Tak Harbourfront Development**

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For discussion  
on 18 November 2016

TFKT/15/2016

## **Upgrading of Kwun Tong Preliminary Treatment Works & Enhancement Works for Kwun Tong Sewage Pumping Station**

### **PURPOSE**

This paper aims to brief Members on the projects “Upgrading of Kwun Tong Preliminary Treatment Works (KTPTW) & Enhancement Works for Kwun Tong Sewage Pumping Station (KTSPS)” to be implemented by the Drainage Services Department, and to seek Members’ views on the project.

### **BACKGROUND**

2. The current peak capacity of KTPTW is 10.92 m<sup>3</sup>/s. To cope with the forecast increase in sewage flow from the committed and planned developments in the East Kowloon, on-site upgrading of the existing KTPTW is necessary to increase the treatment capacity to 13.13 m<sup>3</sup>/s.

3. To cope with the additional sewage flow, a balancing tank is proposed next to the KTSPS to temporarily retain excess preliminarily treated sewage during the peak flow period. In addition, enhancement works are proposed to minimize the visual and odour impact to the vicinity.

### **SCOPE OF WORKS**

4. The Project of Upgrading of KTPTW comprises the following:-

- a) Upgrading of the inlet screw pumping system;

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- b) Provision of an additional grit removal system together with associated grit handling facility and deodorisation system;
- c) Construction of one new grit building and one odour control room;
- d) Modification of the existing influent channel and construction of a new influent channel;
- e) Modification of emergency seawall bypass system;
- f) Carrying out of architectural and landscaping modification works for the existing KTPTW; and
- g) Other ancillary works.

The project location and layout plans for Upgrading of KTPTW are shown in **Annex A** for reference.

5. The Project of Enhancement Works for KTSPS is for the enhancement of the existing facilities and construction of a balancing tank at the Kwun Tong sewage pumping station (KTSPS). The proposed scope of the project comprises the construction of

- (a) A balancing tank and its ancillary facilities to temporarily retain excess preliminarily treated sewage discharged from the upgraded Kwun Tong preliminary treatment works;
- (b) A plant house with ventilation system to enclose the balancing tank and the KTSPS;
- (c) Deodorization systems for the balancing tank and the KTSPS;
- (d) A landscaped deck at the roof of the plant house; and
- (e) Other ancillary works.

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The project location and layout plans for Enhancement Works for KTSPS are shown in **Annex B** for reference.

## THE ARCHITECTURAL AND LANDSCAPE PROPOSAL

6. The aesthetic design of the Upgrading of KTPTW has adopted an **'Industrial Oasis'** concept. The 'Industrial Oasis' is a holistic approach to be applied to both the existing and new KTPTW buildings that will be enhanced/upgraded by putting emphasis on the aesthetic of the buildings and coherence with the nearby environment. This will include basic facade treatment integrated to the many parameters of the basic structures and architectural treatment within utilities exposed on the buildings.

7. The proposed conceptual aesthetic design of the upgrading of KTPTW is shown in **Annex C**. The concept evolves from the basic massing of the buildings towards a total face-lifting with integration of landscape treatment. The concept will also evolve in an industrial setting using steel materials designed architecturally. The site will be enhanced with various greening features that will provide a better ambiance to the users and will help promote a healthier work environment.

8. After the upgrading of KTPTW, the southwest and southeast site boundaries of KTPTW will be set back and part of the existing site of KTPTW will be released for construction of a proposed waterfront promenade and a footpath near Tsui Ping River to improve connectivity between Kwun Tong and the harbourfront. The aesthetic design of KTPTW has taken into consideration of these proposed waterfront promenade and footpath. The design concept 'Industrial Oasis' provides various architectural and greening features at KTPTW which will give a pleasant visual effect to the surrounding environment.

9. The upgrading works of KTPTW have been properly designed to avoid excessive visual impact due to over-design. We have adopted an on-site upgrading approach. Majority of the upgrading works will be carried by replacement or upgrading of the

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existing facilities inside the existing buildings of KTPTW. Construction of new facilities and buildings are kept to minimum.

10. Under the project of enhancement works for KTSPS, a landscaped deck will be constructed on the plant house. The original design is a subtle urban utility building with landscape treatment primarily to serve as a sewage pumping station. We are fully aware of public expectation on opening the deck to become community roof garden for public enjoyment. We are liaising with the relevant Government departments to see the possibilities of changing the use of the landscaped deck, increasing the area of open space and incorporating suitable facilities such as shades, seating and play facilities so that the landscaped deck could be transformed into public open space. In addition to seating and a viewing deck, the space could also be used for different amenity uses. There are benefits in providing an aesthetically pleasing landscaped deck in an urban setting in which aims to contribute on its immediate surrounding and to the district as a whole.

11. The roof garden is visible through its immediate surrounding especially the residential area of Laguna City and the elevated expressway. We have tried to mitigate visual impact and enhance the amenity value of the project. The architectural design concept of **“Dancing Ribbon”** has been adopted and developed with two functional levels. The ground floor remains to be a function level serving the main function of the building as a pumping station while the upper level would be mainly accessible to the public to allow public enjoyment. The design of the proposed plant house will also be in harmony with the adjacent environment. The roof garden adjoins with other existing and planned public leisure facilities, including but not limited to Shing Yip Street Rest Garden, Laguna Park and future Cha Kwo Ling Promenade. An integral potential use of amenity areas can therefore be materialized to maximize the open space for public enjoyment.

12. Under the Enhancement Works for KTSPS, the northwest site boundary of current KTSPS will be released for the construction of a footpath leading to future waterfront promenade. We are also studying other connectivity improvement options connecting with nearby projects under planning.

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13. The roof garden has integrated three fixed skylights for allowing natural sun light penetration during the daytime but providing lighting features from beneath to have light effect at night time. Figures for architectural and landscape design are shown in **Annex D** for reference.

## COMPLIANCE WITH HARBOUR PLANNING PRINCIPLES

14. Reference has been made to the Harbour Planning Principles and Harbour Planning Guidelines when planning the proposed upgrading works of the project:

### Principle 1: Preserving Victoria Harbour

- (a) The works will not involve any reclamation works and the objective to preserve the harbour is fulfilled.

### Principle 2: Stakeholder Engagement

- (b) Upgrading of KTPTW has consulted the Environment and Hygiene Committee of the Kwun Tong District Council (KTDC) on 16 July 2015. The Committee of the KTDC supported the project.
- (c) Enhancement Works for KTSPS will consult the Environment and Hygiene Committee of the KTDC on 15 November 2016.

### Principle 3: Sustainable Development

- (d) The projects will increase the treatment capacity of KTPTW to support the future development of the East Kowloon.
- (e) Enhancement of KTSPS would convert the facility into a fusion of modern urban utility building primarily serving as a 'sewage pumping station' and, subject to further

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deliberation with relevant departments, as a functional roof garden for public enjoyment.

## Principle 4: Integrated Planning

- (f) We have been liaising with the relevant departments tasking forward the relevant projects, such as the waterfront promenade and the Revitalization of Tsui Ping River project to better coordinate the design and the interfacing issues during construction.

## Principle 5: Proactive Harbour Enhancement

- (g) The projects will increase the treatment capacity of KTPTW to cope with the future increase in sewage flow from the East Kowloon and temporarily retain excess preliminarily treated sewage during the peak flow period to protect the water quality of the harbour.

## Principle 6: Vibrant Harbour and Principle 8: Public Enjoyment

- (h) The Upgrading of KTPTW aims to enhance the aesthetic design of the building and mitigate visual impact to the public.
- (i) The Enhancement works for KTSPS aims to provide additional benefits to the public by opening a landscaped garden for public access. The design would be user-friendly and connections with nearby residential area and waterfront promenade would be taken into account.
- (j) The design concept of both projects will be in harmony with the adjacent environment and projects under planning.
- (k) After the upgrading of KTPTW, the southwest and southeast site boundaries of KTPTW will be set back. On the other hand, the northwest site boundary of current KTSPS will be set back. The details of setting back can be referred to **Annexes C and D**. Both projects will also

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release part of the existing site of KTPTW and KTSPS for construction of a proposed waterfront promenade and improvement of connectivity under separate Government projects for holistic planning. In addition to the setting back, we are studying other options for connectivity improvement.

## *Principle 7: Accessible Harbour*

- (l) As mentioned in item (k) above, the projects will facilitate the improvement of connectivity from Kwun Tong to the harbourfront area for public enjoyment.

## **WAY FORWARD**

15. We would like to seek views or comments from the Members to refine and finalize the design. We aim to consult the Legislative Council Panel on Environmental Affairs on the projects in January 2017 and seek for funding approval by June 2017. Subject to funding approval, we target to commence construction of both projects in 2017 for completion in 2022.

## **VIEWS SOUGHT**

16. Members' views on the project are welcome.

**Drainage Services Department  
November 2016**

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## **ATTACHMENTS**

Annex A – Project Location and Layout Plans for Upgrading of Kwun Tong Preliminary Treatment Works

Annex B – Project Location and Layout Plans for Enhancement Works for Kwun Tong Sewage Pumping Station

Annex C – Figures for Conceptual Aesthetic Design for Upgrading of Kwun Tong Preliminary Treatment Works

Annex D – Figures for Architectural and Landscaping Design for Enhancement Works for Kwun Tong Sewage Pumping Station

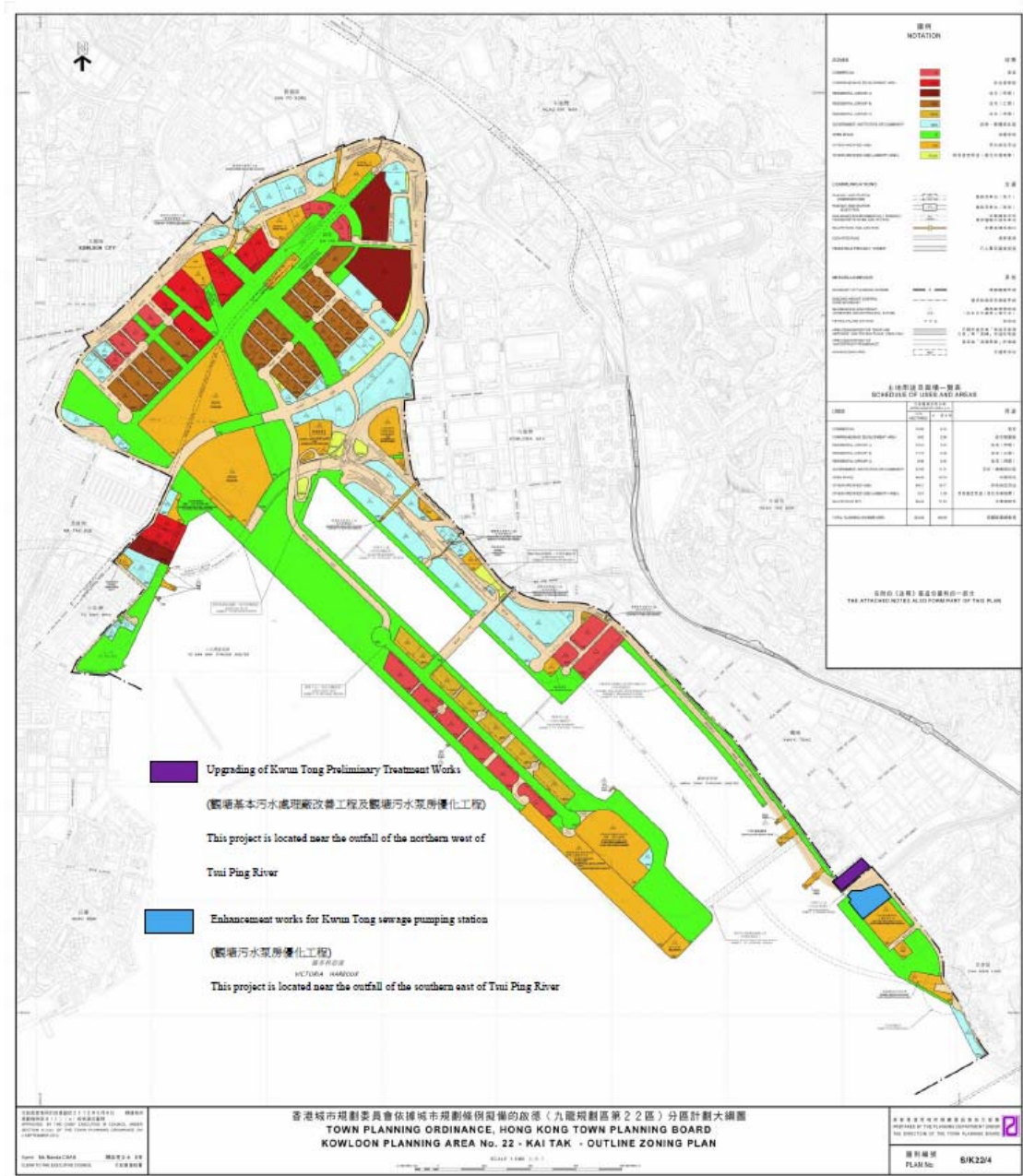


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**Annex A**

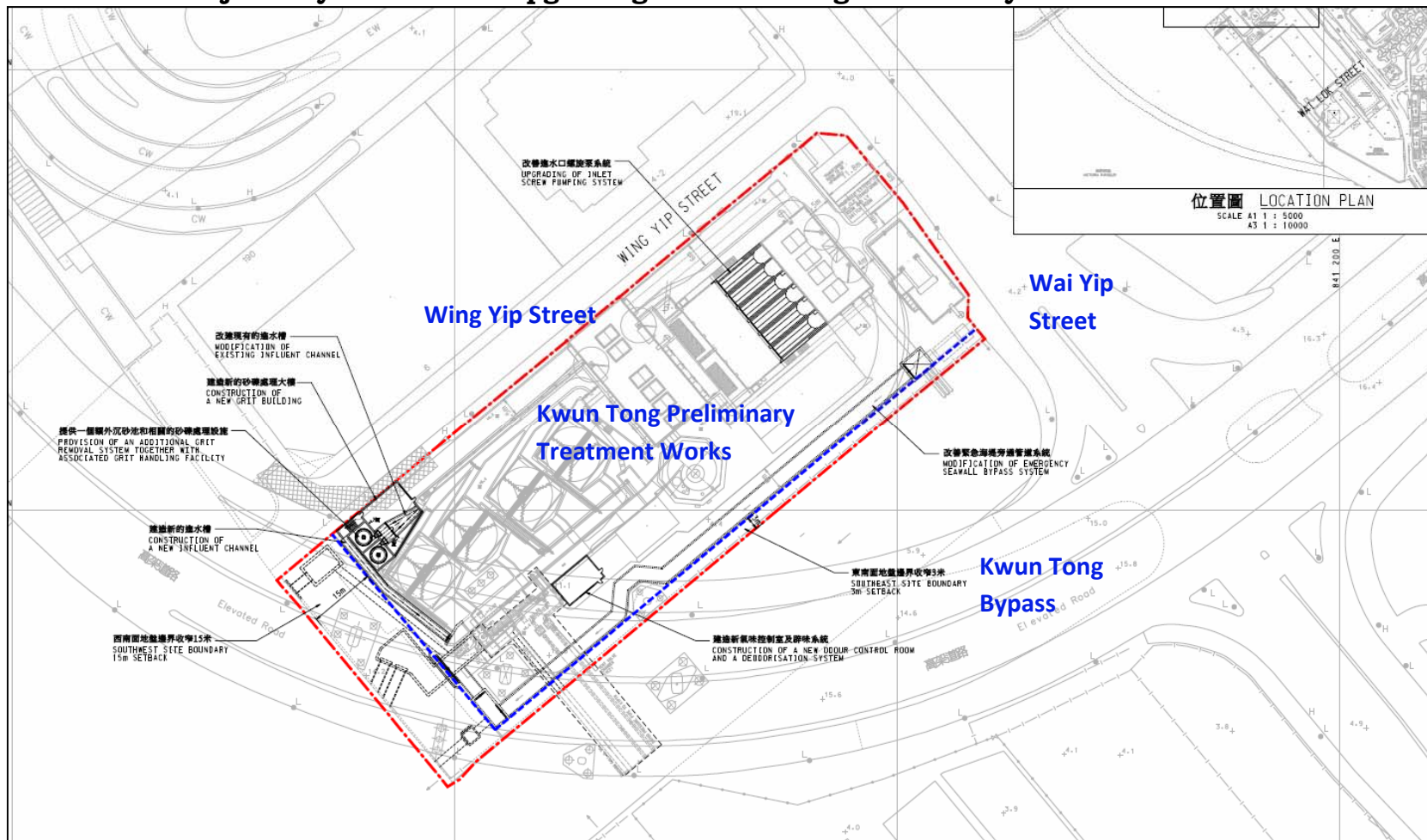
## Project Location Plan for Upgrading of Kwun Tong Preliminary Treatment Works



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Annex A

## Project Layout Plan for Upgrading of Kwun Tong Preliminary Treatment Works

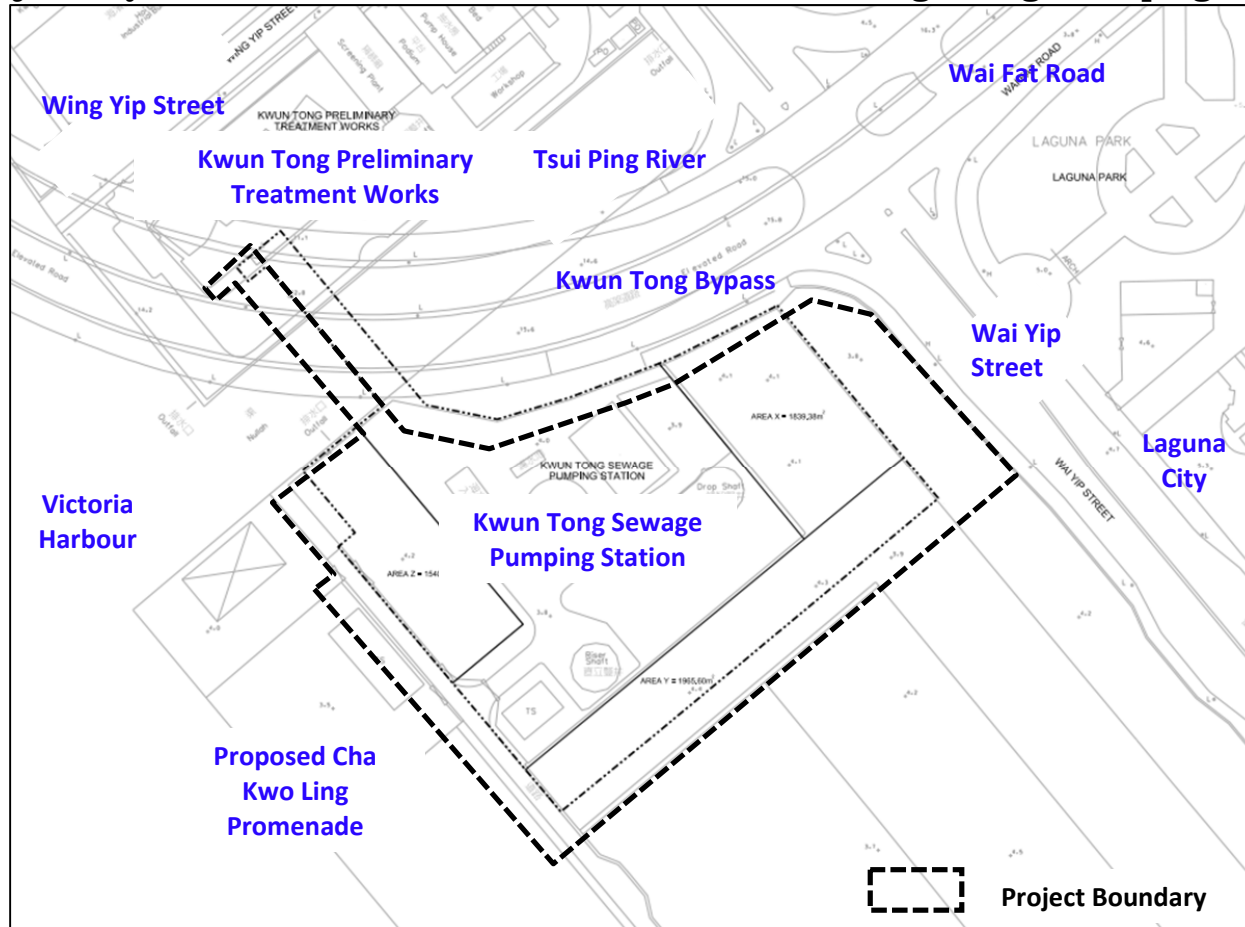




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**Annex B**

## Project Layout Plan for Enhancement Works for Kwun Tong Sewage Pumping Station

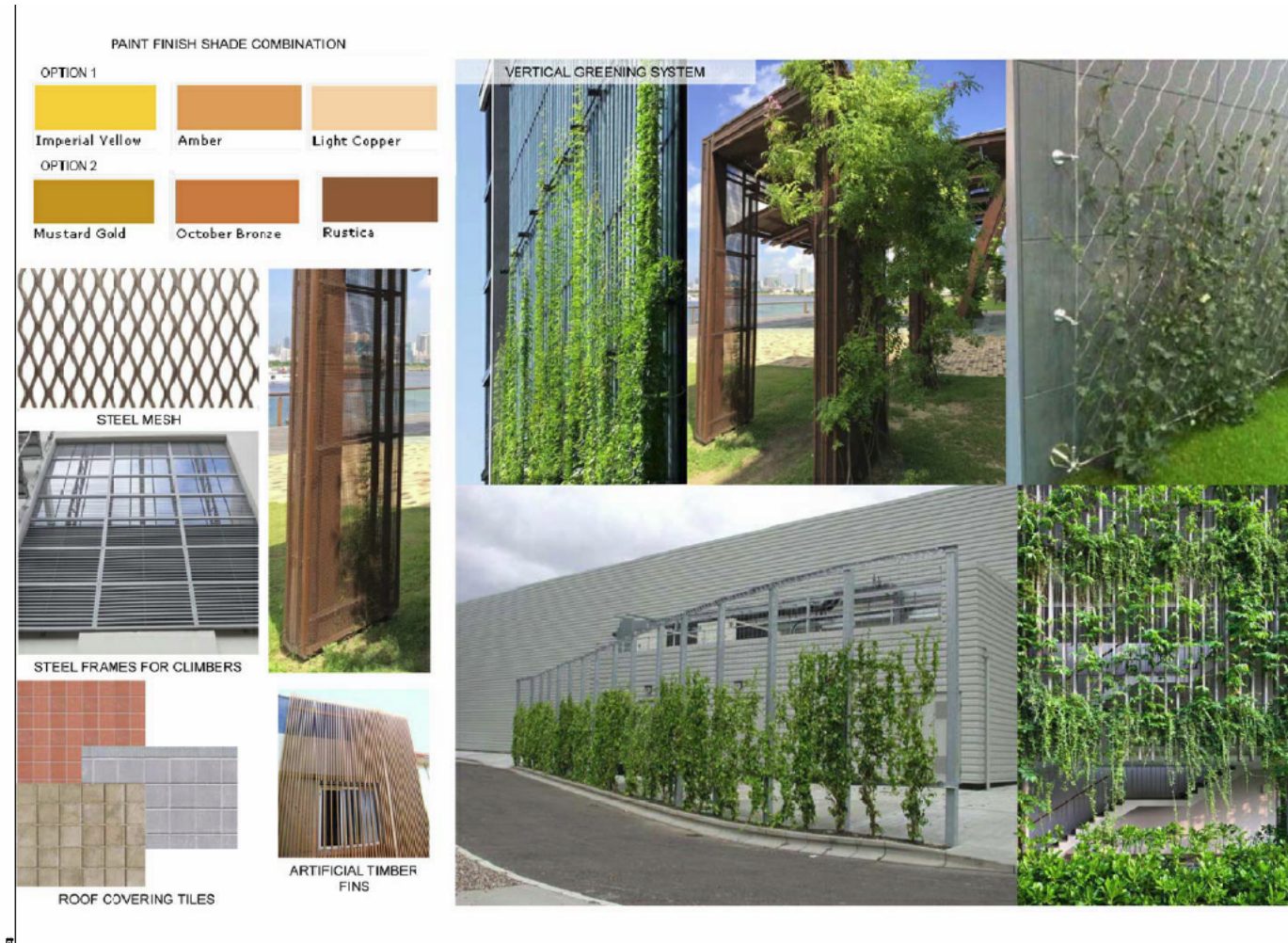




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## Annex C

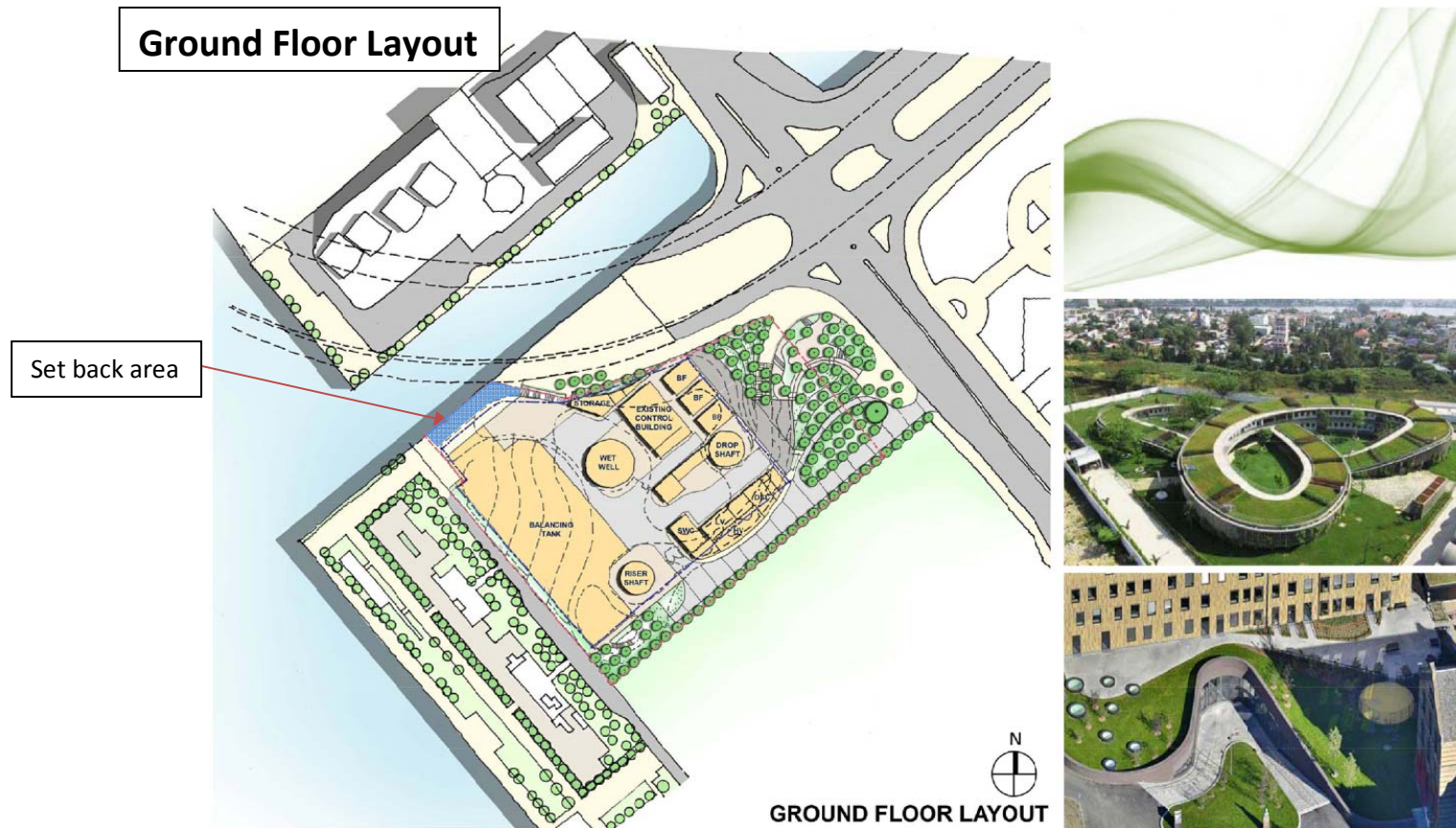


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## Annex D

### Figures for Architectural and Landscape Design for Enhancement Works for Kwun Tong Sewage Pumping Station



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## Annex D

### Roof Garden Layout

