For discussion
on 22 May 2006

LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS

PWP Item 93DR – Chai Wan Public Fill Barging Point

Purpose

This paper briefs Members on the Administration's proposal to submit PWP Item **93DR** "Chai Wan Public Fill Barging Point" to the Public Works Subcommittee for upgrading to Category A at an estimated cost of $102.7 million in money-of-the-day (MOD) prices.

Background

2. The construction industry in Hong Kong generates a large amount of inert construction and demolition (C&D) materials, which are also known as public fill, each year. These materials, comprising building debris, broken rocks, broken concrete and excavated earth, are mainly reused as fill materials in reclamation and earth filling works. Public Fill Barging Points (PFBPs) are required for collecting public fill and loading the materials onto barges for delivery by sea to reclamation sites in Hong Kong or the two temporary fill banks at Tseung Kwan O and Tuen Mun to stockpile the surplus public fill temporarily for later use.

3. In 2005, the quantity of public fill arising from Hong Kong Island is 1.12 million tonnes. It is anticipated that this will increase to 1.56 million tonnes in 2008, which will require some 130 000 cross-harbour trips per year by trucks to transport the material to the public fill reception areas in New Territories if no PFBPs are provided on Hong Kong Island. Given that there are no committed reclamation sites on Hong Kong Island suitable for the delivery of public fill by trucks, the operation of a barging point on Hong Kong Island, which will provide an outlet for public fill generated from Hong Kong Island is environmentally preferable and an essential element of the public fill management as it will substantially help alleviate cross-harbour traffic due to dump trucks.

4. At present, all public fill generated from Hong Kong Island is being handled at the temporary barging facilities at Quarry Bay which is scheduled to close in early 2008. The timely construction of the permanent barging point at Chai Wan is therefore required. The temporary Quarry Bay Public Fill Barging Point will cease its operation by early 2008. We need to construct a permanent barging point on Hong Kong Island to continue the barging operation.

Proposal

5. We propose to construct the Chai Wan Public Fill Barging Point (CWPFBP) at the Chai Wan Cargo Handling Basin.

6. The project scope comprises –

(a) an enclosed tipping hall (structural steel works with aluminium claddings as the enclosure) for unloading of public fill onto barges;

(b) an elevated road bridge to link up the northern and southern portions of the site;

(c) an elevated platform linking the road bridge to the tipping hall;

(d) ramps to and from the tipping hall;

(e) road and associated ground stabilization works;

(f) a combined administration building, reception offices and exit offices;

(g) installation of utility services (e.g. water supply, power supply, telecommunication, etc.);

(h) provision of electrical & mechanical equipment for handling public fill;

(i) construction of landscaping works; and

(j) implementation of environmental mitigation and monitoring works.

A layout plan and sections showing the proposed works are at Enclosure 1.

7. We plan to commence the construction works in September 2006 for commissioning the barging operation in March 2008.

Financial Implications

8. We estimate the cost of the proposed works to be $102.7 million in MOD prices, made up as follows –

		$ million	
(a)	Tipping hall	16.9	
(b)	Elevated road bridge	15.3	
(c)	Elevated platform and ramps to and from the tipping hall	12.3	
(d)	Roads and associated ground stabilization works	27.6	
(e)	Combined administration building, reception offices and exit offices	11.0	
(f)	Utility services	3.6	
(g)	E&M equipment handling public fill	2.4	
(h)	Landscaping works	1.1	
(i)	Environmental mitigation and monitoring works	1.0	
(j)	Contingencies	8.6	
	Sub-total	99.8	(in September 2005 prices)
(k)	Provision for price adjustment	2.9	
	Total	102.7	(in MOD prices)

9. We have substantially completed the major part of the design of the proposed barging point by using in-house resources. We have also engaged consultants to undertake detailed design and construction supervision of the architectural and electrical & mechanical works of the proposed barging point at an estimated cost of $1.3 million. We have charged the amount to block allocation **Subhead 5101CX** "Civil engineering works, studies and investigations for items in Category D of the Public Works Programme". We plan to commence the construction in September 2006 for commissioning of the proposed facilities in March 2008. We will deploy in-house resources to supervise the construction works with assistance from the consultants.

10. We estimate that the proposed works will create about 92 jobs (83 for labourers and another 9 for professional/technical staff) providing a total employment of 1 350 man-months.

Public Consultation

11. We consulted the Works and Development Committee (WDC) of the Eastern District Council on the setting up and operation of the barging point in April 2000, October 2000, February 2005, December 2005 and March 2006. Concerns have been raised by Members of WDC, in particular the need for the Government to actively pursue the installation of mechanical cover for dump trucks in order to mitigate air impacts and ensure road safety. Also, there have been concerns about the traffic impact on the Chai Wan areas. To address the former, the Environment, Transport and Works Bureau has recently promulgated a Technical Circular requiring all public works contracts with contract sum of $20 millions or more to use dump trucks equipped with mechanical covers for delivery of construction and demolition materials under the Pay for Environment Scheme. At the joint meeting of the WDC and the Traffic and Transport Committee (TTC) under the Eastern District Council held on 30 March 2006, we undertook to report regularly to WDC on the progress of cover installation and to conduct some minor road improvement works in order to improve the traffic arrangements. Both WDC and TTC had no objection to the project.

Environmental Implications

12. The project is not a designated project under the Environmental Impact Assessment Ordinance. Nevertheless, we completed an environmental study in 2000 to assess the environmental impacts of the construction and operation of the CWPFBP. The findings and recommendations of the environmental study concluded that environmental impacts from the barging point could be controlled to within established guidelines and standards. We would implement suitable mitigation measures to control short-term construction environmental impacts, install and operate wheel-washing facility and water spraying system, and use enclosed tipping hall during the project operation. We estimate the cost of implementing the environmental monitoring and mitigation measures, for the proposed barging point to be $1.0 million. We have included this cost in the overall project estimate.

13. At the planning and design stages of the project, we have taken due consideration in designing the level and layout of the proposed works, so as to minimise the generation of C&D materials as far as possible. We will require the contractor to reuse the excavated material as filling material on site or in other construction sites as far as possible to minimise the disposal of C&D materials to public fill reception facilities. To further minimise the generation of C&D materials, we will encourage the contractor to maximise the use of recycled or recyclable C&D materials, as well as the use of non-timber formwork.

14. We will also require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill, C&D materials and C&D waste to public fill reception facilities, sorting facilities and landfills respectively through a trip-ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

15. We estimate that the project will generate about 17 266 tonnes of C&D materials. Of these, we will reuse about 8 091 tonnes (47%) on site, deliver 7 853 tonnes (45%) to public fill reception facilities[1] for subsequent reuse, and 863 tonnes (5%) to sorting facilities in order to retrieve the inert portion for reuse as public fill. In addition, we will dispose of 459 tonnes (3%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites, together with the cost for handling the materials at sorting facilities is estimated to be $355,706 for this project (based on an unit cost of $27/tonne for disposal at public fill reception facilities, $100/tonne at sorting facilities and $125/tonne[2] at landfills).

Advice Sought

16. Members are invited to note our proposal of upgrading 93DR for consideration by the Public Works Subcommittee in June 2006 with a view to seeking funding approval by FC in July 2006.

Environmental Protection Department

May 2006

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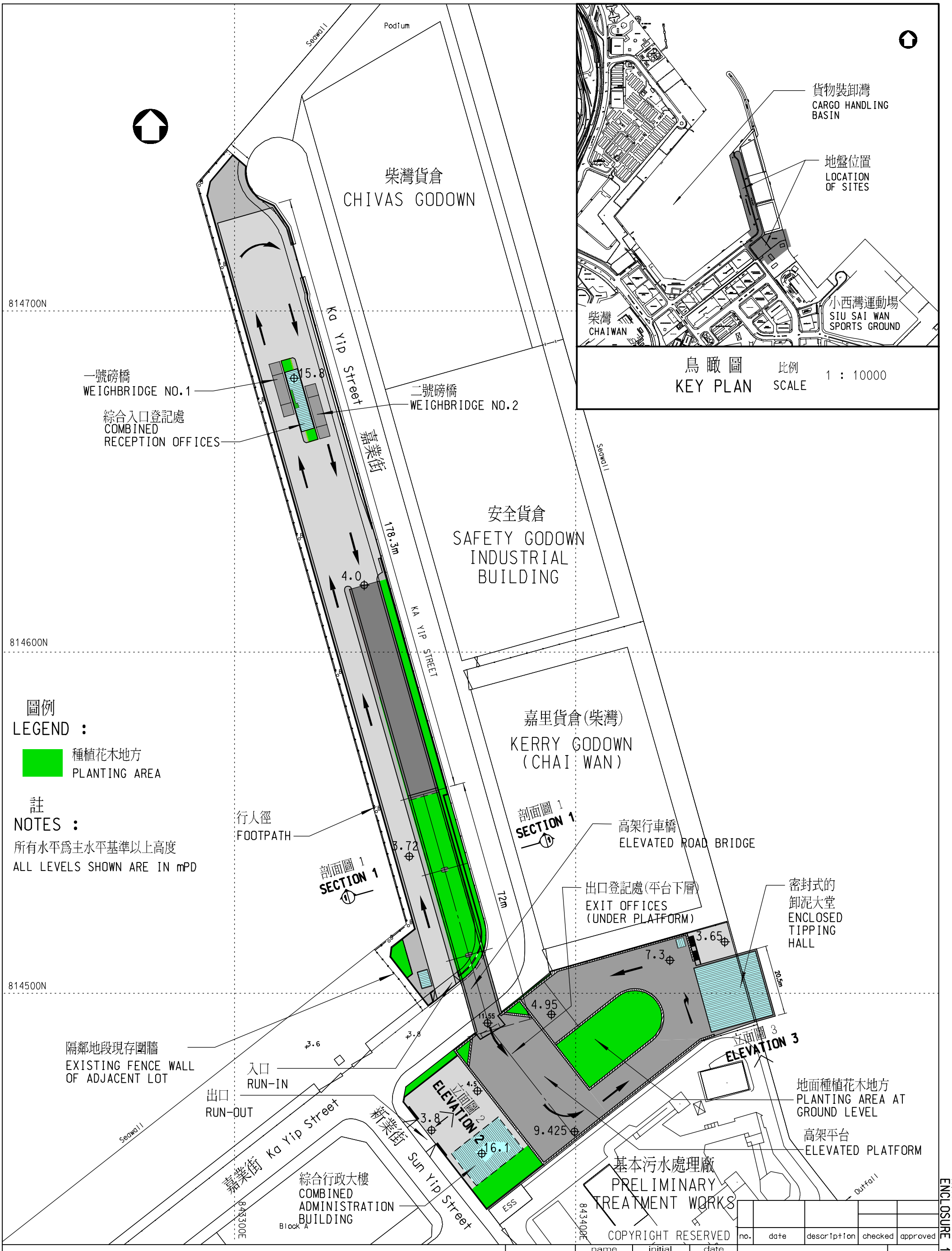
[1] Sorting facilities and public fill reception facilities are specified in Schedule 3 and Schedule 4 respectively of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of public fill in public fill reception facilities requires a licence issued by the DCED.

[2] This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at $\$90/m^3$), nor the cost to provide new landfills, (which is likely to be more expensive) when the existing ones are filled.



圖例
LEGEND :

種植花木地方
PLANTING AREA

註
NOTES :

所有水平爲主水平基準以上高度
ALL LEVELS SHOWN ARE IN mPD

no.	date	description	checked	approved

title
柴灣公眾填土躉船轉運站的平面圖
LAYOUT OF THE CHAI WAN PUBLIC FILL BARGING POINT

	name	initial	date
designed	K.K. YIP		
drawn	C.H. LEE		
checked	W.H. CHAN		
approved			
office	FILL MANAGEMENT DIVISION CIVIL ENGINEERING OFFICE		

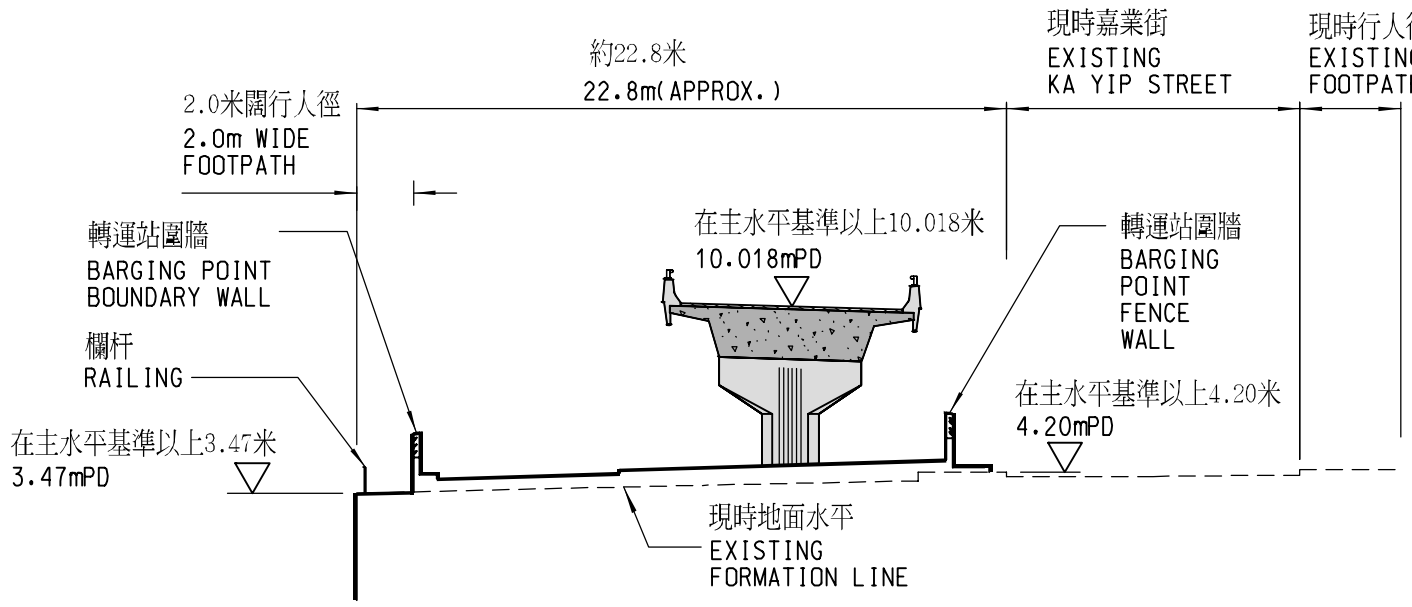
drawing no. **FM10019-23**

scale 1:1000

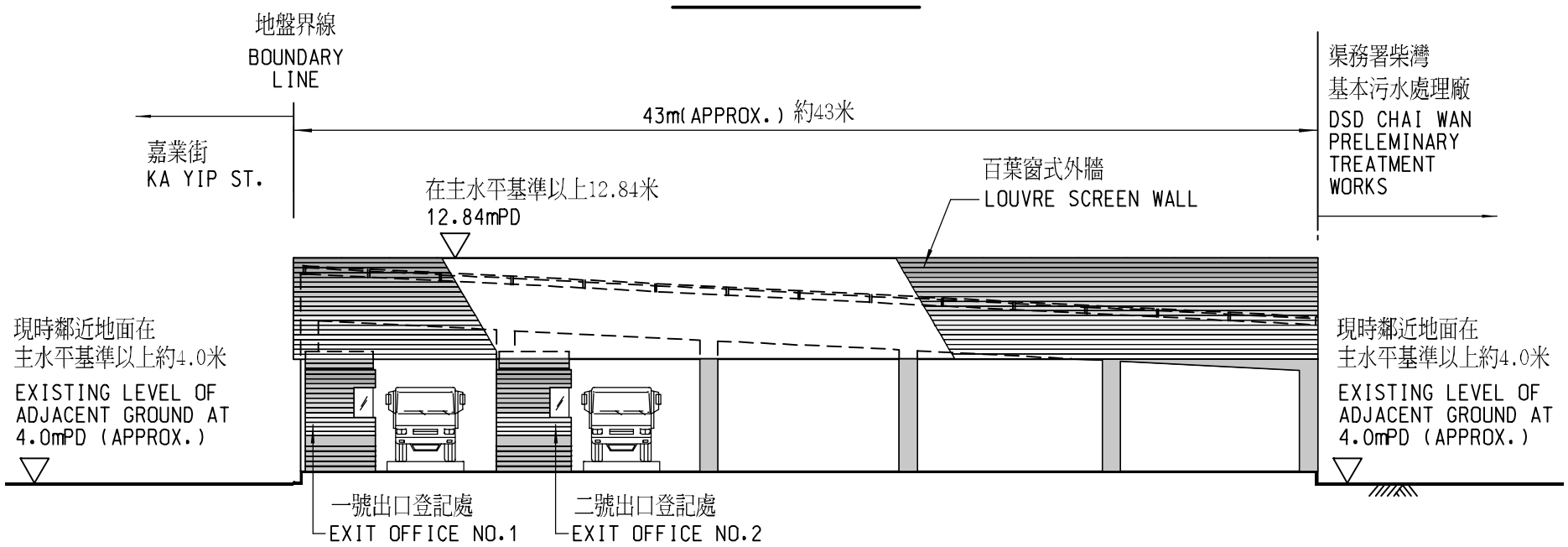
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT HONG KONG

附件一 ENCLOSURE 1 (全二張其一) (SHEET 1 OF 2)

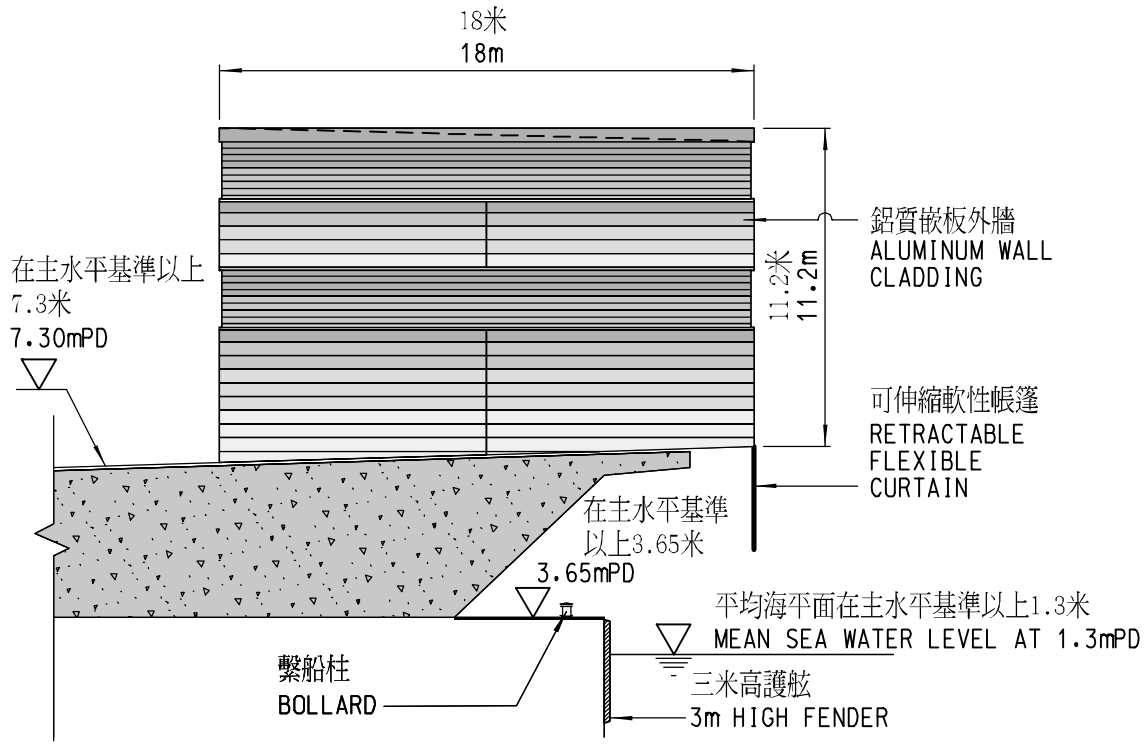
A3 297 x 420



剖面圖 1-1
SECTION 1-1



立面圖 2
ELEVATION 2



立面圖 3
ELEVATION 3

no.	date	description	checked	approved

	name	initial	date
designed	K.K. YIP		
drawn	C.H. LEE		
checked	W.H. CHAN		
approved			
office	FILL MANAGEMENT DIVISION CIVIL ENGINEERING OFFICE		

title

柴灣公眾填土躉船轉運站的剖面圖與立面圖

SECTIONS AND ELEVATIONS OF THE
CHAI WAN PUBLIC FILL BARGING POINT

drawing no. FM10019-24

scale 1:250

CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT
HONG KONG

附件一(全一張其一)
ENCLOSURE 1 (SHEET 2 OF 2)