

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 705 - CIVIL ENGINEERING

Transport - Ferry piers

38TF - Reconstruction of public piers at

Kat O Chau, Peng Chau, Cheung Chau and Wu Kai Sha

Members are invited to recommend to Finance Committee the upgrading of **38TF** to Category A at an estimated cost of \$119.6 million in money-of-the-day prices for the reconstruction of the public piers at Kat O Chau, Peng Chau, Cheung Chau and Wu Kai Sha.

PROBLEM

The existing public piers at Kat O Chau, Peng Chau, Cheung Chau and Wu Kai Sha are in poor condition and need reconstruction.

PROPOSAL

2. The Director of Civil Engineering (DCE), with the support of the Secretary for Economic Services, proposes to upgrade **38TF** to Category A at an estimated cost of \$119.6 million in money-of-the-day (MOD) prices for the reconstruction of the public piers at Kat O Chau, Peng Chau, Cheung Chau and Wu Kai Sha.

PROJECT SCOPE AND NATURE

3. The scope of the project comprises the following works to be carried out for the public piers at Kat O Chau, Peng Chau, Cheung Chau and Wu Kai Sha –

/(a)

- (a) demolition of four existing piers;
- (b) construction of four replacement piers; and
- (c) construction of four roof covers with associated lighting for the four new piers.

We plan to start the reconstruction works in May 2002 for completion in July 2004. The layout plans of the four piers are at Enclosures 1 to 4.

JUSTIFICATION

4. The existing public piers at Kat O Chau, Peng Chau, Cheung Chau and Wu Kai Sha were built in the 1950s and are currently maintained by Civil Engineering Department (CED). Details of the berthing facilities provided by the four piers are tabulated below –

Location of the public pier	Berthing facilities
Kat O Chau	For regular "kaito" services between Sha Tau Kok and Kat O Chau
Peng Chau	For regular "licensed ferry" services between Peng Chau and Hei Ling Chau, and "kaito" services between Peng Chau and Discovery Bay
Cheung Chau	For regular "kaito" services between Cheung Chau and Sai Wan
Wu Kai Sha	For local fishermen and government vessels

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5. In conducting inspections for the piers during the past few years, CED found that all of the four piers are in poor condition. They are deteriorating with widespread reinforcement corrosion and concrete spalling, and are beyond economic repair. If the reconstruction project does not proceed, the piers will require more frequent and substantial repairs to meet acceptable safety standards, and create inconvenience to pier users. We therefore propose to reconstruct the piers. We will also take this opportunity to upgrade the existing facilities by providing roof covers to the replacement piers for shelter and shading purposes.

6. During the reconstruction stage, we will provide temporary berthing and mooring facilities to the existing piers at Kat O Chau, Cheung Chau and Wu Kai Sha. At Peng Chau, we will temporarily divert the pier users to two adjacent landings which are respectively 20 metres (m) and 120 m away from the existing pier.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be \$119.6 million in MOD prices (see paragraph 8 below) made up as follows –

	\$ million
(a) Demolition of four existing piers	1.3
(b) Construction of four replacement piers (including provision of temporary berthing and mooring facilities to the existing piers)	99.4
(i) Kat O Chau	23.3
(ii) Peng Chau	25.0
(iii) Cheung Chau	39.2
(iv) Wu Kai Sha	11.9

/(c)

		\$ million	
(c)	Construction of four roof covers with associated lighting (including a service charge of \$0.22M charged by Electrical and Mechanical Services Trading Fund (EMSTF) ¹)	9.8	
(d)	Contingencies	11.1	
	Sub-total	121.6	(in September 2001 prices)
(e)	Provision for price adjustment	(2.0)	
	Total	119.6	(in MOD prices)

8. Subject to approval, we will phase the expenditure as follows –

Year	\$ million (Sept 2001)	Price Adjustment Factor	\$ million (MOD)
2002 – 2003	19.3	0.98625	19.0
2003 – 2004	97.4	0.98378	95.8
2004 – 2005	4.9	0.98378	4.8
	121.6		119.6

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¹ Since the establishment of EMSTF on 1 August 1996 under the Trading Funds Ordinance, government departments are charged for design and technical consultancy services for electrical and mechanical installations provided by EMSTF. Services rendered in this project include project management and contract administration for the provision of electrical and mechanical facilities for the new piers.

9. We have derived the MOD estimate on the basis of the Government's latest forecast of trend labour and construction prices for the period 2002 to 2005. Since the quantities of most of the proposed works items are certain, we will carry out the proposed civil engineering works under two lump-sum contracts (one contract for the works at Kat O Chau and Peng Chau and the other for the works at Cheung Chau and Wu Kai Sha). The contracts will not provide for price adjustment as the contract period will not exceed 21 months. We will carry out installation of the associated lighting for the piers through EMSTF under another two lump-sum contracts without provision for price adjustment.

10. We estimate the annual recurrent expenditure arising from this project to be \$0.23 million.

PUBLIC CONSULTATION

11. We have consulted the Cheung Chau Area Committee on 28 November 2000 and 3 December 2001, Peng Chau and Discovery Bay Area Committee on 28 February 2001, Sha Tau Kok District Rural Committee on 26 April 2001 and Shatin District Council on 26 June 2001 on the proposed reconstruction of the public piers at Cheung Chau, Peng Chau, Kat O Chau and Wu Kai Sha respectively. The Committees/Council supported the proposed reconstruction works and their suggestions, such as provision of additional bollards and increasing the width of access catwalk, have been incorporated into the design of the proposed works.

12. We gazetted the proposed reconstruction works at Kat O Chau, Peng Chau, Cheung Chau and Wu Kai Sha under the Foreshore and Sea-bed (Reclamations) Ordinance (the Ordinance) on 20 July 2001, 10 August 2001, 19 October 2001 and 9 November 2001 respectively. We did not receive any objections to the reconstruction works at Cheung Chau and Wu Kai Sha. One objection was raised by World Wide Fund For Nature Hong Kong on 4 September 2001 to the reconstruction works at Peng Chau and Kat O Chau on grounds of their possible impact on the nearby corals. We explained to the objector that according to the water quality monitoring results of previous pier reconstruction projects, there would be no adverse impact on water quality. We will install silt curtain around the work site to contain any possible mud generated from the construction works. We will also monitor the water quality around the work site and the coral area during the reconstruction period. The objector was satisfied with the above explanations and the proposed mitigation measures, and has withdrawn the objection subsequently.

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13. We gazetted the authorisation of the proposed reconstruction works at Kat O Chau and Peng Chau, Cheung Chau and Wu Kai Sha on 2 November 2001, 4 January 2002 and 25 January 2002 respectively.

14. We consulted the Economic Services Panel of the Legislative Council on 20 March 2002. Members raised no objection to the proposed reconstruction works.

ENVIRONMENTAL IMPLICATIONS

15. The project is not a designated project under the Environmental Impact Assessment (EIA) Ordinance. For each pier, we have completed a Preliminary Environmental Review (PER) which sets out mitigation measures including the installation of a silt curtain around the project site and water-spraying during demolition of the existing piers to reduce emission of fugitive dust during construction. The PERs have been approved by the Director of Environmental Protection. In addition, we shall implement other standard pollution control measures such as silencers and siltation chambers to control short-term environmental impacts during construction to within the established standards and guidelines. We estimate the cost of implementing the above mitigation measures to be \$1.56 million. We have included this cost in the overall project estimate.

16. We will require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reuse and recycle construction and demolition (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 and C&D waste to designated public filling facilities and landfills respectively through a trip-ticket system. The contractor will be required 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.

17. We have considered in the planning and design stages the need to minimise the generation of C&D materials. We estimate that the project will generate about 800 cubic metres (m³) of C&D materials, including broken concrete and timber fenders generated by the demolition of the existing piers. Of these, we will reuse about 150 m³ (19%) of demolished pier elements as artificial

/reefs

reefs in Outer Port Shelter at Sai Kung, 550 m³ (69%) as fill in public filling areas² and 50 m³ (6%) of fenders in the repair of other government piers in Hong Kong. The remaining 50 m³ (6%) will be disposed of at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be \$6,250 for this project (based on a notional unit cost³ of \$125/m³).

LAND ACQUISITION

18. This project does not require land acquisition and clearance.

BACKGROUND INFORMATION

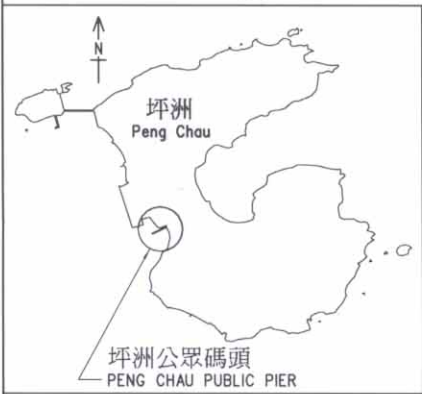
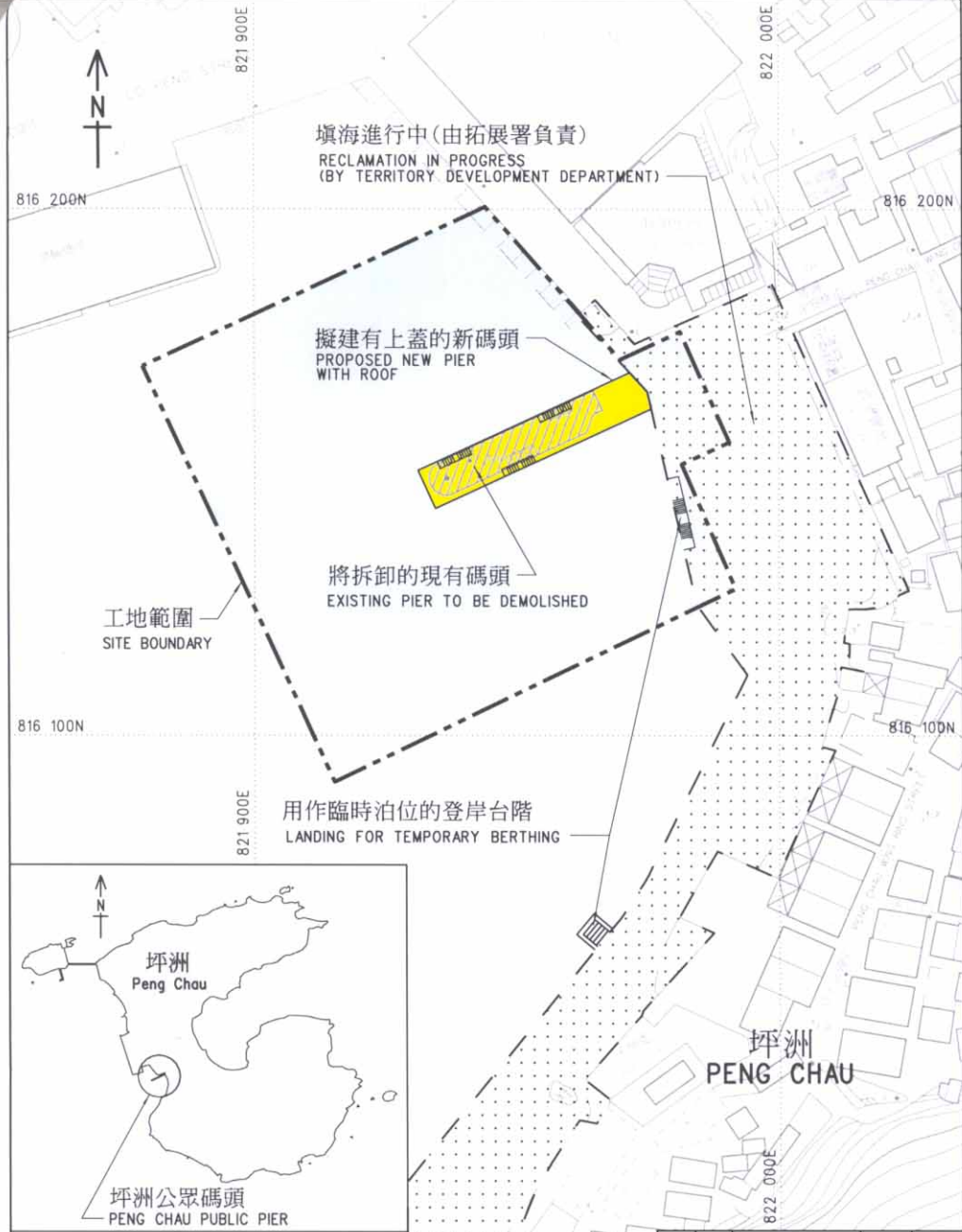
19. We included this project in Category B of the Public Works Programme in September 2000. CED has completed the design of the project using in-house resources.

20. We estimate that the project will create some 66 jobs comprising 11 professional/technical staff and 55 labourers, totalling 1 725 man-months.

Economic Services Bureau
March 2002

² A public filling area is a designated part of a development project that accepts public fill for reclamation purposes. Disposal of public fill in a public filling area requires a licence issued by the Director of Civil Engineering.

³ 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/m³), nor the cost to provide new landfills (which are likely to be more expensive) when the existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.



LOCATION PLAN 位置圖
SCALE 1:25 000 比例

title 名稱
坪洲公眾碼頭重建工程
- 總平面圖
RECONSTRUCTION OF
PENG CHAU PUBLIC
PIER - GENERAL LAYOUT

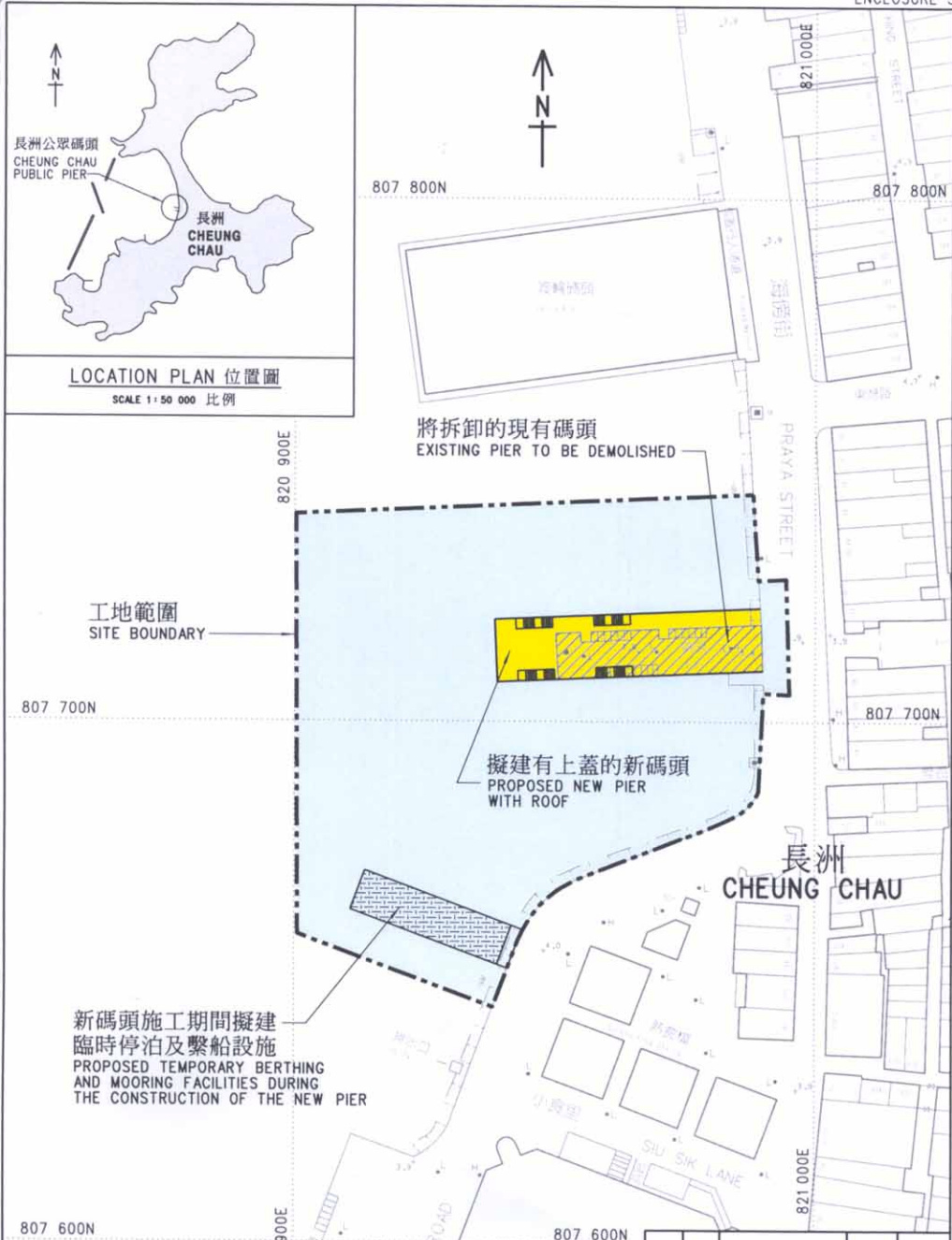
name 姓名	initial 簡簽	date 日期
designed 設計	H L LAM	28.9.2001
drawn 繪畫	K L CHAN	28.9.2001
checked 核對	Y K AU	28.9.2001
approved 核准	K M LEUNG	28.9.2001

office TECHNICAL SERVICES DIVISION 工程技術部
CIVIL ENGINEERING OFFICE 土木工程處

no. 編號	date 日期	description 說明	checked 核對	approved 核准
drawing no. 圖則編號		TS 1477	scale 比例	
			1:1 000	

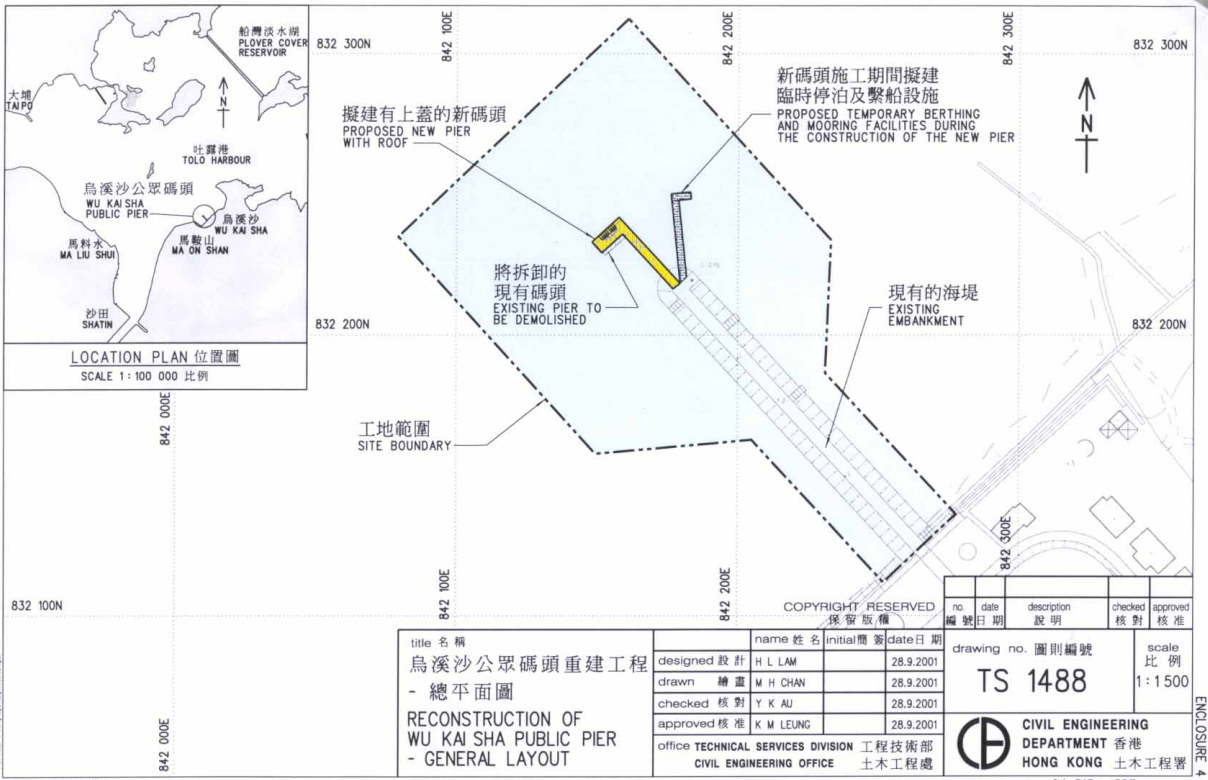
CIVIL ENGINEERING DEPARTMENT 香港
HONG KONG 土木工程署

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title 名稱		name 姓名		initial 簡簽		date 日期		no. 編號		date 日期		description 說明		checked 核對		approved 核准	
長洲公眾碼頭重建工程 - 總平面圖		designed 設計		H L LAM		28.9.2001		drawing no. 圖則編號		TS 1457		scale 比例		1:1000			
RECONSTRUCTION OF CHEUNG CHAU PUBLIC PIER - GENERAL LAYOUT		drawn 繪畫		P K CHEN		28.9.2001											
		checked 核對		Y K AU		28.9.2001											
		approved 核准		K M LEUNG		28.9.2001											
		office TECHNICAL SERVICES DIVISION 工程技術部 CIVIL ENGINEERING OFFICE 土木工程處						 CIVIL ENGINEERING DEPARTMENT 香港 HONG KONG 土木工程署									

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 11/28/2014 11:56:15 per: ts1457.ap



LOCATION PLAN 位置圖
SCALE 1:100 000 比例

title 名稱
烏溪沙公眾碼頭重建工程
- 總平面圖
RECONSTRUCTION OF
WU KAI SHA PUBLIC PIER
- GENERAL LAYOUT

name 姓名	initial 簡簽	date 日期
designed 設計	H. L. LAM	28.9.2001
drawn 繪圖	M. H. CHAN	28.9.2001
checked 核對	Y. K. AU	28.9.2001
approved 核准	K. M. LEUNG	28.9.2001

office TECHNICAL SERVICES DIVISION 工程技術部
CIVIL ENGINEERING OFFICE 土木工程處

no. 編號	date 日期	description 說明	checked 核對	approved 核准

drawing no. 圖則編號
TS 1488
scale 比例
1:1500

CIVIL ENGINEERING DEPARTMENT HONG KONG
工程技術部 香港 土木工程署

ENCLOSURE 4