

LEGISLATIVE COUNCIL PANEL ON PLANNING, LANDS AND WORKS

324CL - Tseung Kwan O Development Phase 3, remaining engineering works

BACKGROUND

In December 1991, we upgraded the project 324CL to Category B. The original scope of the project covers all engineering works associated with the phase 3 development of Tseung Kwan O (TKO) (see Enclosure 1A). Finance Committee approved upgrading of 324CL in parts to Category A on five separate occasions from June 1993 to June 1997 (see Enclosure 1B)

2. Other than the works we propose to upgrade to Category A this time (i.e. para. 3 below), some of the remaining works under 324CL have been while the others will be included as separate public works programme (PWP) items (see Enclosure 1C).

PROPOSAL

3. We now propose to upgrade part of 324CL (i.e. the remainder of (b) in Enclosure 1A) to Category A to cover -

- (a) reclamation of 20 hectares of seabed;
- (b) construction of a 90-metre long sloping seawall;
- (c) construction of a 430-metre long single cell box culvert, a 400-metre long 7-cell box culvert, and a 140-metre long 8-cell box culvert; and a pumphouse.
- (d) environmental mitigation measures and an environmental monitoring and audit programme.

Details of the proposed works are at Enclosure 2 - Plan TK2267A.

JUSTIFICATION

4. We have completed most of the reclamation of the TKO Town Centre extension. The remaining reclamation to be completed under this project will provide 20 hectares of land in Areas 67, 68 and 72 for housing development, essential supporting engineering infrastructure, open space and G/IC facilities. Planned developments in Area 67 include three schools, two residential developments, open space, roads and drains. One of the roads will serve a proposed private sector participation scheme (PSPS) housing site on part of Area 67 that is already reclaimed. This PSPS site, to accommodate about 3,600 flats for a population of 11,500 by 2007 can only be tendered for development after the remainder of Area 67 is reclaimed. TKO Area 67 (south) is planned for a private development of 3,190 flats for a population of 7,200 by 2008. Area 68 is to be developed as part of a waterfront promenade.

5. Developments in Area 72 are planned to include 2 schools, a clinic, a police station, a fire station, an ambulance depot, an indoor recreation centre, a refuse collection point, a lorry park and associated roads and services. The schools and clinic are to serve the adjacent housing development in Tiu Keng Leng area while the other facilities will serve the entire new town. Upon full development, the Tiu Keng Leng area will accommodate about 28,230 flats for a population of about 81,900. In accordance with the Public Housing Development Programme, the population intake at Tiu Keng Leng will be from 2000 to 2007. Part of Area 72 has already been formed and we need to reclaim the remaining portion immediately so that the essential schools and other facilities can be built to match the population growth of Tiu Keng Leng and the development of the new town as a whole.

6. In association with the proposed reclamation works, we need to extend the existing main box culvert to discharge storm water from the hinterland to the sea. As part of the proposed box culvert will be submerged under water, we need to construct a pump house to facilitate future desilting operation.

7. It is the Government's policy to maximise the reuse of public fill in land formation and reclamation so as to minimise the disposal of inert construction and demolition (C&D) material¹ at the landfills. At present, there are three public filling areas² in the territory, located at Tung Chung Development Phase 3A, TKO Area 137

Note :

1. The inert portion of C&D material (also referred to as public fill) comprises earth, broken rock, concrete and building debris (e.g. bricks and plaster) which does not decompose or cause any bad odour. Using public fill for reclamation not only helps conserve natural resources, but also conserves valuable landfill space designed for disposing of municipal solid waste.
2. A public filling area is a designated part of a development project that accepts public fill as filling material for reclamation purpose. Disposal of public fill in a public filling area requires a licence issued free of charge by the Director of Civil Engineering.

and Pak Shek Kok in Sha Tin. Between January and September 1999, TKO Area 137 has taken in about 2.9 million cubic metres of public fill, which was 68% of the total amount produced during that period, largely because of its convenient location. We estimate that the TKO Area 137 will be full by late 2000.

8. Because of uncertainty associated with other planned reclamation projects, there would be an acute shortfall of public filling capacity. We propose to make use of the TKO town centre extension as a public filling area, to provide about 2.2 million cubic metres of public filling capacity. If the TKO town centre extension does not proceed, there will be no public filling area in southeast Hong Kong after the completion of the TKO Area 137 reclamation. By 2001, the available public filling capacity will not be able to handle the territory's total demand³.

COST

9. The cost estimate of the proposed works is about \$487.0 million at December 1998 prices (\$544.3 million in MOD). We will submit a paper for the consideration of the PWSC on 5 January 2000.

PROGRAMME

10. Subject to funding approval, we schedule to commence the reclamation contract in February 2000 for completion by January 2003.

PUBLIC CONSULTATION

11. We consulted the Sai Kung Provisional District Board in April 1998 on the draft TKO Outline Zoning Plan (OZP) which encompasses the works under 324CL. Members supported the proposed works.

12. We gazetted the draft OZP No. S/TKO/5 in May 1998 and received no objection related to the proposed works. The Chief Executive in Council (CE in C) approved the OZP on 9 February 1999.

Note :

3. If no further reclamation projects were approved by 2001, Pak Shek Kok would be the only public filling area left. The remaining public filling capacity by then will be about 2 million cubic metres against a territorial annual demand of more than 5 million cubic metres.

13. We gazetted the proposed reclamation works under the Foreshore and Seabed (Reclamations) Ordinance on 1 August 1997 and received one objection from the property developer of Tseung Kwan O Town Lot 55 on grounds of the impact of the reclamation on his property development. After a series of negotiation, the objector withdrew the objection. The Chief Executive in Council authorised the reclamation works without modification on 6 February 1998.

ENVIRONMENTAL IMPLICATIONS

14. The proposed stage 2 of the remaining reclamation in the town centre extension forms an integral part of the overall TKO New Town reclamation, the environmental impacts of which have been addressed in an Environmental Impact Assessment study completed in May 1990 as part of TKO Feasibility Study of Opportunities for Further Development. The Director of Environmental Protection also completed an Environmental Review in February 1997 which reaffirmed that the proposed works would not have long-term adverse environmental impacts and standard pollution control measures would be sufficient to mitigate the short-term construction impacts. We have included the cost of mitigation measures and environmental monitoring and audit in the project estimate and will incorporate these requirements into the contract for implementation.

15. We have considered in the planning and design stages for the reclamation works to minimize the generation of C&D material and to maximize the reuse of public fill. About 2.2 million cubic metres of public fill will be reused in the reclamation and about 200 cubic metres of decomposable C&D waste which cannot be used for reclamation will be disposed of at landfills. The contractor will be required to submit under the contract a waste management plan setting out waste avoidance and reduction measures including the allocation of an area for waste segregation on site to facilitate reuse/recycling of C&D material. The Engineer for the contract will ensure that the day-to-day operations on site comply with the waste management plan. We shall also encourage the contractor to use steel instead of timber in formwork and temporary works to further minimize the generation of C&D material. A trip-ticket system will be implemented to record and monitor the disposal, reuse and recycling of C&D material produced.

FISHERIES IMPACT

16. The impact of the proposed works on commercial fishing activities will be negligible. The proposed reclamation area is already partially enclosed by seawall. The seabed is partially covered by the temporary sloping edge of the existing reclamation. The body of water enclosed by the existing reclamations cannot be used for commercial fishing or other water-front activities. An aerial photo showing the site and adjacent areas is in Enclosure 3-Plan TKZ0063.

SETTLEMENT

17. Settlement at new reclamation is an unavoidable natural phenomenon. Reclamation by public fill will not result in unusual settlement. We are aware of the unusual settlement in TKO and the detailed design of the works has taken into account possible unusual settlements. The reclamation proposed in para. 3 has been designed⁴ to take into account settlement in different soil strata and that the whole reclamation area will be surcharged to accelerate settlement. The box culverts and the pumphouse to be constructed under this reclamation contract will all be on piles and have been designed for negative skin friction possibly arising from the settlement of various soil strata. In addition, extensive geotechnical monitoring devices⁵ will be installed throughout the site area to check the evolution of pore water pressure in the various strata.

URGENCY

18. We need to start the reclamation contract in Feb 2000 and to complete the reclamation works of the town centre extension (Area 67, 68 & 72) by mid 2003 to provide formed land for the construction of housing, essential engineering infrastructure, open space and G/IC facilities to match :

- i) the population intake at Tiu Keng Leng (phased from 2000 to 2007); and
- ii) the land sale programme of Area 67 south in 2003/2004.

Note :

4. Comprehensive ground investigation comprising land and marine drilling (with associated sampling, in-situ testing, marine vibrocoring and marine piezocone penetration testing (PCPT)) and laboratory tests for obtaining accurate in-situ geotechnical parameters for the aforesaid design have been completed under a separated TDD Contract No. TK47/99. Moreover, the geological profile including the thickness of each layer of soil / rock and their properties are also determined. Based on these, the height (up to 10m) and pre-loading period (9 to 12 months) of the pre-loading mounds, the spacing (1.3m) of the band drains have been designed to accommodate the settlement of both marine deposit and alluvium (both soft and firm) layers throughout the reclamation area.
- 5 These include movement marker, inclinometers, extensometers, standpipe piezometer and vibrating wire piezometers.

19. As stated in paragraph 7 above, the public filling area at TKO Area 137 will be full by late 2000. We need to provide a continuous public filling area in TKO. In order to enable the site to receive public fill by October 2000 as planned, the Contract needs to start in February 2000 as a six to eight month period for seabed preparation is required.

20. We need the land in mid 2003 for road construction to complete the road network for TKO Town Centre South by mid 2006.

Planning, Environment and Lands Bureau
December 1999

Original Scope of PWP item No. 324CL

- (a) site formation works, roads and drains at Pak Shing Kok;
- (b) town centre extension-reclamation and main drainage extension;
- (c) provision of a finger pier and a breakwater;
- (d) town centre extension - roads, drains, sewers, ferry and public piers, and landscaping;
- (e) construction of Road P2 from Road D1 to Western Coast Road;
- (f) construction of Western Coast Road;
- (g) construction of a cross-bay bridge and a flyover at the P2/D9 road junction;
- (h) dualling of Hang Hau Road;
- (i) provision of a flyover at Road P2/D1 roundabout;
- (j) provision of a flyover at Road P2/D4 junction;
- (k) provision of a flyover at Road P2/D8 junction;
- (l) connection of Road D6 from Road P1 to Road D3; and
- (m) extension of Road D6 to Area 137

A location plan of the above works is at Enclosure 4 (Plan TK2269).

Part of PWP item No. 324CL already upgraded to Cat A
(including works described in (b), (k) (part) and (m) of Enclosure 1A)

Upgrade to Cat A	Project	Construction Start date	Construction Completion date
Jun 1993	413CL TKO development, phase 3, reclamation (part) of the town centre extension (part of works described in (b) of Enclosure 1A)	Jun 1994	Mar 1999
Jul 1995	456CL TKO development, engineering infrastructure at Town Centre North (part of works described in (k) of Enclosure 1A)	Dec 1995	Nov 1999
Jul 1996	474CL TKO development, phase 3, remaining reclamation in the town centre extension, stage 1 (part of works described in (b) of Enclosure 1A)	Dec 1996	Dec 1999
Nov 1996	698TH TKO development, phase 3 - extension of Road D6 to area 137 (works described in (m) of Enclosure 1A)	Aug 1997	Oct 1999
Jun 1997	481CL TKO development, phase 3 - remaining reclamation in the town centre extension, stage 2 : site investigation and consultants' fees (part of works described in (b) of Enclosure 1A)	Jul 1997	Feb 2000

**Remaining Works of PWP item No. 324CL to be
implemented under separated PWP items**

Upgraded to Cat B - (works described in (d), (e), (f), (h) and (k) (part) in Enclosure 1A)

		Project
Sep 1998	727TH	Roads and drainage works in Tseung Kwan O Town Centre South (works described in (d) of Enclosure 1A)
May 1995	576TH	Tseung Kwan O development phase 3 - Road P2 connecting Town Centre and Western Coast Road (works described in (e) of Enclosure 1A)
May 1995	584TH	Tseung Kwan O development phase 3 - Western Coast Road (works described in (f) of Enclosure 1A)
May 1995	583TH	Tseung Kwan O development phase 3 - dualling of Hang Hau Road (works described in (h) of Enclosure 1A)
Sep 1999	730TH	Tseung Kwan O development - superstructure of flyover at Road P2/D8 junction (remaining works described in (k) of Enclosure 1A)

Completed PPFS reports - (works described in (a) and (l) in Enclosure 1A)

**To be Upgraded
to Cat C**

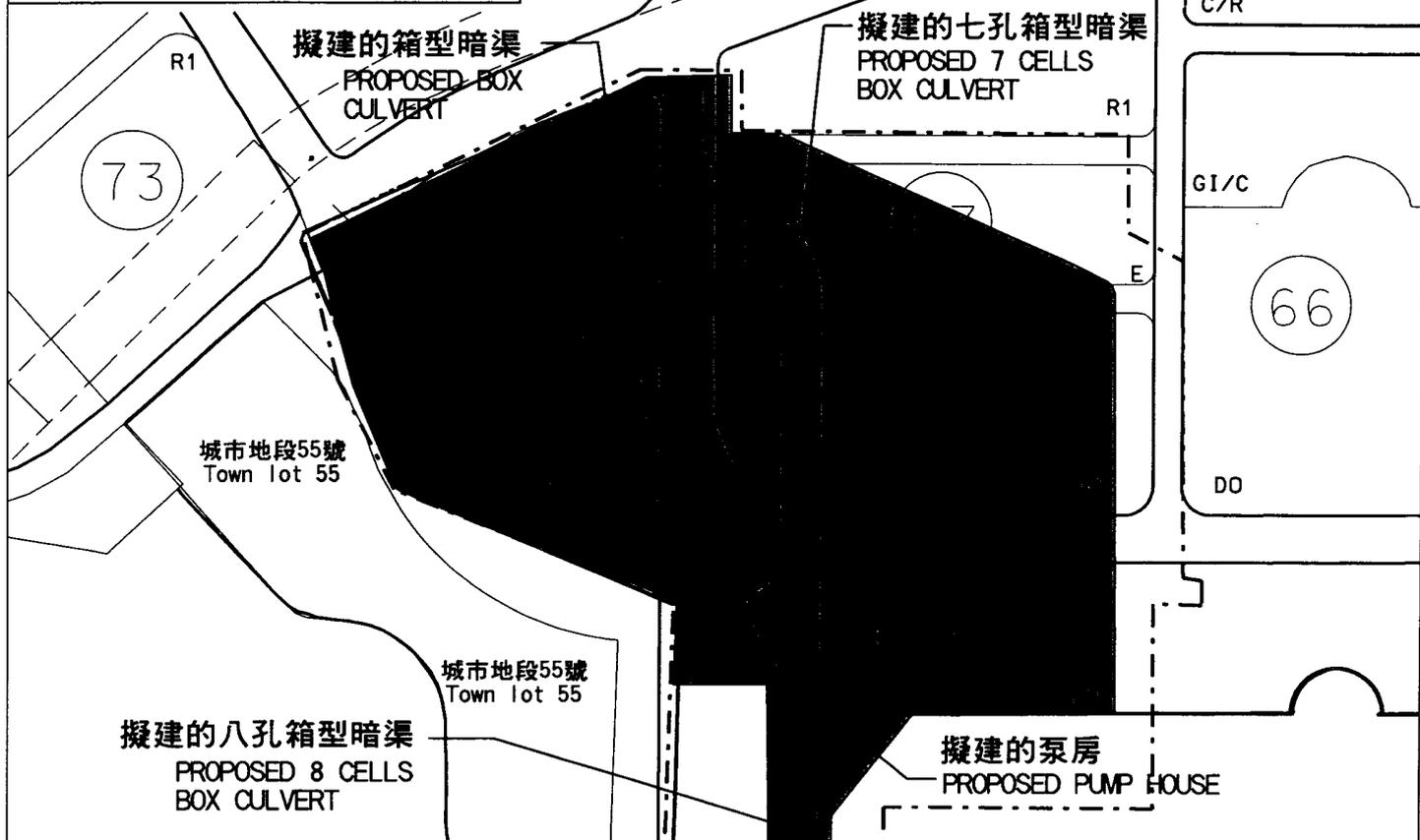
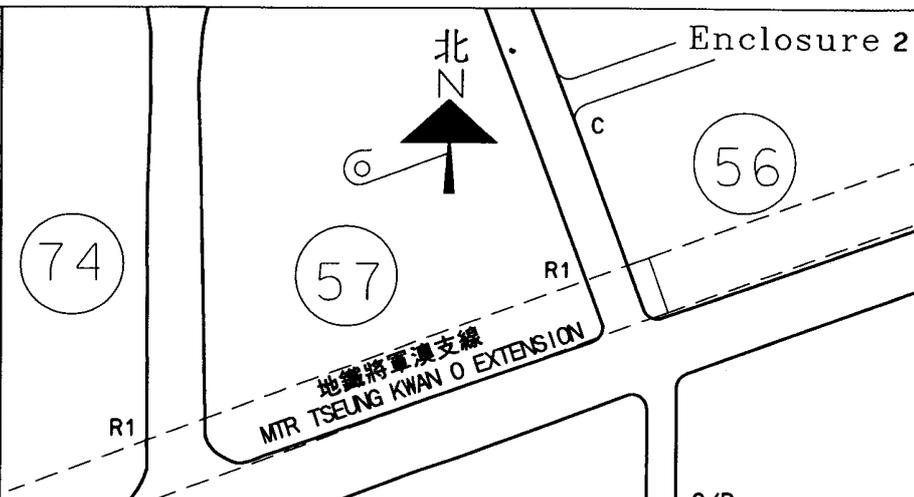
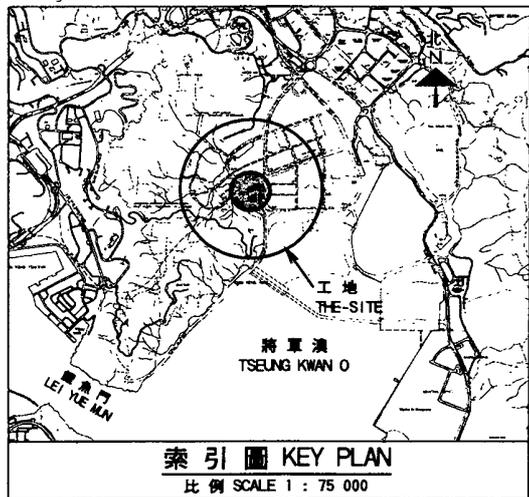
Dec 1999
(awaiting S for Tsy's
approval)

Project

Site formation works, roads and drains at Pak Shing Kok and Road D6 (part)

Outstanding PPFS reports - (works described in (c), (g), (i) and (j) in Enclosure 1A)

Works described in (c), (g), (i) and (j) in Enclosure 1A will be covered by separate PPFS reports. The PPFS for works in (g) and (i) is in progress. The PPFSs for works in (c) and (j) will start in 2000.



圖例 LEGEND :

- 填海區
PROPOSED RECLAMATION AREA
- 工程界限
WORKS BOUNDARY
- 規劃區編號
PLANNING AREA NUMBER
- 教育
EDUCATION
- 商業
COMMERCIAL
- 住宅發展密度第1區
RESIDENTIAL - ZONE 1

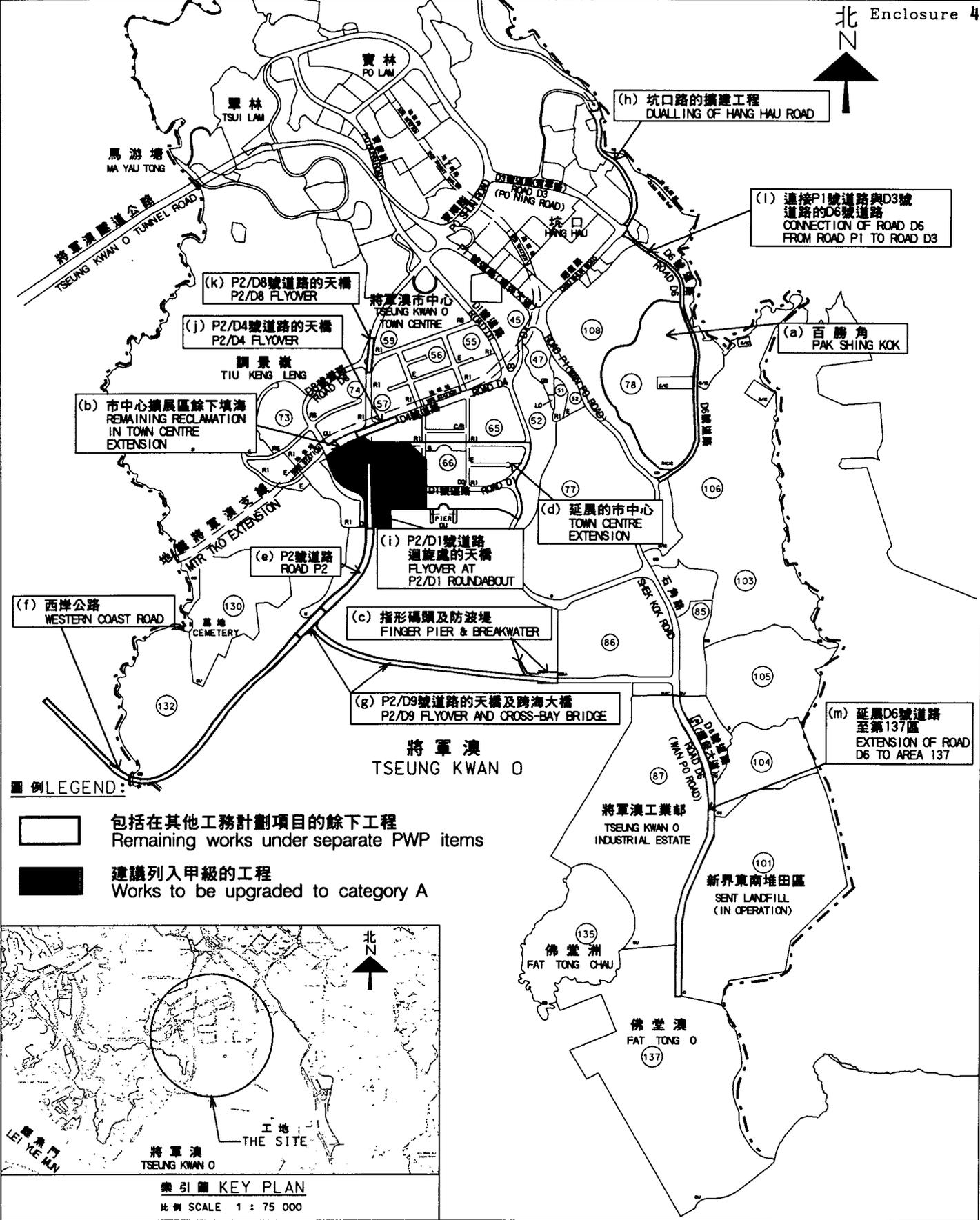
- 地區休憩用地
DISTRICT OPEN SPACE
- 商業/住宅
COMMERCIAL /RESIDENTIAL
- 政府·機構或社區
GOVERNMENT, INSTITUTION OR COMMUNITY
- 現有填海線
EXISTING RECLAMATION LINE
- 現有海堤
EXISTING SEAWALL

B	1.12.99	加入現有海堤 EXISTING SEAWALL ADDED	SWF	6
A	28.11.99	加入城市地段55號及現有填海線 TOWN LOT 55 AND EXISTING RECLAMATION LINE ADDED	SWF	6
編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
修訂 REVISION				

一九九九年至二〇〇〇年度工務小組委員會文件 P.W.S.C. SUBMISSION 1999 - 2000				項目編號 Item No. 324CL/B	
圖則名稱 drawing title		繪圖 draw	簽署 initial	日期 date	比例 scale
將軍澳發展計劃 第3期餘下工程 TSEUNG KWAN O DEVELOPMENT, PHASE 3 - REMAINING ENGINEERING WORKS		M K LEE	MLK	22.9.99	1 : 5 000
		核對 checked	簽署 initial	日期 date	
		S W FUNG	SWF	24.9.99	圖則編號 drawing no.
		核准 approved	簽署 initial	日期 date	TK2267B
		K C LEUNG	KCL	24.9.99	
				辦事處 office 新界東拓展處 NT EAST DEVELOPMENT OFFICE	
				拓展署 TERRITORY DEVELOPMENT DEPARTMENT	

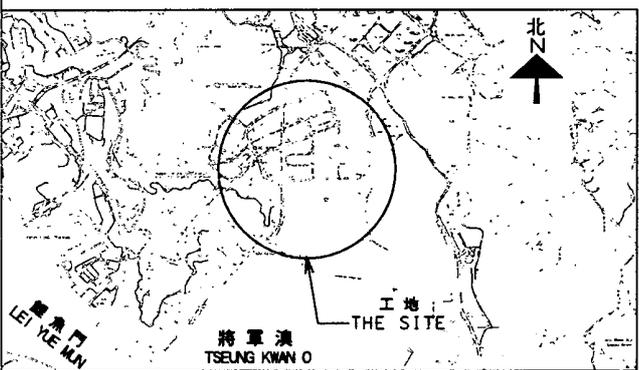


圖則名稱 drawing title 將軍澳發展計劃第3期餘下工程 TSEUNG KWAN O DEVELOPMENT PHASE 3 - REMAINING ENGINEERING WORKS	繪圖 drawn	簽署 initial	日期 date	項目編號 item no.	辦事處 office 新界東拓展處 NEW TERRITORIES EAST DEVELOPMENT OFFICE
	W K CHUI	<i>WKC</i>	15.11.99	324CL/B	
	核對 checked	簽署 initial	日期 date	比例 scale	圖則編號 drawing no.
S W FUNG	<i>SWF</i>	15.11.99		TKZ0063	 拓展署 TERRITORY DEVELOPMENT DEPARTMENT
核准 approved	簽署 initial	日期 date			
K C LEUNG	<i>KCL</i>	15.11.99			



圖例 LEGEND:

- 包括在其他工務計劃項目的餘下工程
Remaining works under separate PWP items
- 建議列入甲級的工程
Works to be upgraded to category A



索引圖 KEY PLAN
比例 SCALE 1 : 75 000

一九九九年至二〇〇〇年度工務小組委員會文件 P. W. S. C. SUBMISSION 1999-2000					項目編號 ITEM No. 324CL/B			
圖則名稱 drawing title 將軍澳發展計劃 第3期餘下工程 TSEUNG KWAN O DEVELOPMENT, PHASE 3 - REMAINING ENGINEERING WORKS	繪圖 drawn	簽署 initial	日期 date	比例 scale 1:30 000	辦事處 office 新界東拓展處 NT EAST DEVELOPMENT OFFICE			
	核對 checked	簽署 initial	日期 date					
	核准 approved	簽署 initial	日期 date	圖則編號 drawing no. TK2269	拓展署 TERRITORY DEVELOPMENT DEPARTMENT			
M K LEE	[Signature]	6.11.99	S W FUNG	[Signature]		8.11.99	K C LEUNG	[Signature]