

For discussion
on 14 February 2001

PWSC(2000-01)92

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

**HEAD 707 - NEW TOWNS AND URBAN AREA
DEVELOPMENT**

New Territories North Development

Civil Engineering - Land development

**225CL - Yuen Long - Tuen Mun corridor - engineering works for
commercial/residential areas at Hung Shui Kiu, stage II**

Members are invited to recommend to Finance
Committee -

- (a) the upgrading of part of **225CL**, entitled “Hung Shui Kiu development, stage II – engineering infrastructure north of Castle Peak Road, phase 1”, to Category A at an estimated cost of \$92.1 million in money-of-the-day prices; and
- (b) the retention of the remainder of **225CL**, retitled “Hung Shui Kiu development, stage II - remaining engineering infrastructure and site formation works”, in Category B.

PROBLEM

The existing roads and supporting infrastructure at Hung Shui Kiu north of Castle Peak Road are substandard and will not be able to cope with future developments.

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PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Planning and Lands, proposes to upgrade part of **225CL** to Category A at an estimated cost of \$92.1 million in money-of-the-day (MOD) prices for the construction of roads, drains and essential infrastructure to support the further development of Hung Shui Kiu.

PROJECT SCOPE AND NATURE

3. The scope of the part of **225CL** we propose to upgrade to Category A comprises (coloured pink on the site plan at Enclosure 1) -

- (a) construction of about 1 kilometre of roads including Roads L1, L2(part), L6(part) and a section of Hung Shui Kiu Main Street, with associated footpaths and cycle tracks;
- (b) reconstruction and widening (from 5.5 metres (m) to 10.3 m) of a 800-m section of Tin Ha Road between San Lee Uk Tsuen and Castle Peak Road;
- (c) a vehicular bridge and a pedestrian/cyclist subway;
- (d) associated drainage and sewerage works;
- (e) landscaping works;
- (f) noise barriers and indirect noise mitigation measures in the form of window insulation and air conditioners to an existing kindergarten; and
- (g) an environmental monitoring and audit (EM&A) programme for works mentioned in paragraphs (a) to (f) above.

We plan to start the proposed works in July 2001 for completion in May 2004.

4. The remainder of **225CL**, to be retained in Category B, comprises the construction of access roads to individual development sites in Hung Shui Kiu, widening and reconstruction of Tan Kwai Tsuen Road and the northern section of Tin Ha Road, site formation for two open space areas, and associated drainage, sewerage and landscaping works (coloured blue and green on the site plan at Enclosure 1).

JUSTIFICATION

5. The rural town of Hung Shui Kiu has an area of about 63 hectares. It is situated half-way along the Yuen Long – Tuen Mun (YL–TM) corridor and straddles both sides of Castle Peak Road. Since 1980, several private housing developments, accommodating 4 000 persons, have been completed in Area 2 (south of Castle Peak Road) and Areas 1, 4 and 9A (north of Castle Peak Road) of Hung Shui Kiu.

6. Hong Kong Housing Society is planning a public housing development in Area 13 to accommodate about 12 000 persons with population intake from November 2004 to 2005. The Kowloon Canton Railway Corporation is also planning to undertake a comprehensive development above the Light Rail Transit depot in Area 12 to accommodate 6 400 persons by 2007. The locations of the planning areas are shown on the plan at Enclosure 1.

7. The existing Tin Ha Road and Tin Sum Road are substandard, without proper footpaths and pedestrian crossing facilities. Coupled with the developments over the years, there is frequent traffic congestion at Tin Ha Road, particularly at the junction between Tin Ha Road and Castle Peak Road. According to a traffic assessment carried out in October 2000, the current reserve capacity¹ of the junction is about –5% during the peak hours. The situation will deteriorate even further with the increasing population intake in the area in the coming years. The heavy traffic together with the lack of proper pedestrian crossing facilities are also affecting road safety in the area.

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¹ The reserve capacity is a performance indicator for a signalised road junction. A reserve capacity equals to or greater than 0 means that the road junction has sufficient capacity to cope with the volume of vehicular traffic under consideration and the resultant traffic will flow smoothly. A reserve capacity below 0 indicates that the junction is overloaded, thus resulting in traffic queues and longer delay time.

8. The proposed widening of Tin Ha Road and Tin Sum Road and the provision of pedestrian crossing facilities will help to relieve the traffic congestion and road safety problems. Upon completion of the proposed works, the reserve capacity of the junction will be increased to +40% in 2004.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be \$92.1 million in MOD prices (see paragraph 10 below), made up as follows -

		\$ million	
(a)	Roadworks	35.9	
(b)	Vehicular bridge and pedestrian/cyclist subway	15.4	
(c)	Drainage and sewerage works	19.9	
(d)	Landscaping works	2.8	
(e)	Environmental mitigation measures	4.4	
	(i) noise barriers	2.6	
	(ii) indirect noise mitigation measures	0.1	
	(iii) other mitigation measures	0.7	
	(iv) EM&A programme	1.0	
(f)	Contingencies	7.5	
	Sub-total	85.9	(in September 2000 prices)

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(g)	Provision for price adjustment	6.2	
	Total	<u>92.1</u>	(in MOD prices)

10. Subject to approval, we will phase the expenditure as follows -

Year	\$ million (Sept. 2000)	Price adjustment factor	\$ million (MOD)
2001 – 2002	16.1	1.02550	16.5
2002 – 2003	28.3	1.05627	29.9
2003 – 2004	28.2	1.08795	30.7
2004 – 2005	11.3	1.12059	12.7
2005 – 2006	2.0	1.15421	2.3
	<u>85.9</u>		<u>92.1</u>

11. We have derived the MOD estimate on the basis of Government's latest forecast of trend labour and construction prices for the period from 2001 to 2006. We will tender the proposed works under a standard remeasurement contract because the quantities of earthworks involved may vary according to the actual ground conditions. The contract will provide for inflation adjustment because the contract period will exceed 21 months.

12. While site staff from the Highways Department will provide on-site supervision, there are no in-house resources to carry out the EM&A programme for the works. DTD therefore proposes to employ consultants for conducting the EM&A programme. A breakdown by man-months of the estimate for consultants' staff expenses is at Enclosure 2.

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13. We estimate the annually recurrent expenditure arising from this project to be \$1.27 million.

PUBLIC CONSULTATION

14. We consulted the Traffic and Transport Committee and the Environmental Improvement Committee of the then Yuen Long District Board on the proposed works on 7 September 1993 and 23 January 1997 respectively. Members of both committees supported the proposed works.

15. We gazetted the roadworks and sewerage works under the Roads (Works, Use and Compensation) Ordinance (RO) and the Water Pollution Control (Sewerage) Regulation (WPCR) respectively on 28 November 1997. We received five objections to the proposed works under the RO and three objections under the WPCR. Three of the objections under the RO and all three objections under the WPCR were subsequently withdrawn. The remaining two objectors under the RO, who objected to the resumption of their land, refused to withdraw their objections. We could not accede to the objectors' request to realign the proposed roads as it would inevitably affect other private land and buildings. On 1 December 1998, the Chief Executive in Council (CE in C) overruled the two objections on the grounds of public interest and authorized the proposed roadworks without modifications.

16. Before the Administration gazetted the land resumption notice, an objection was received from the owner of land near the junction of Tin Ha Road and Castle Peak Road against the resumption of his land. We have further revised the road scheme to reduce the area to be resumed and informed the owner of the proposed modifications. No further objection was received from the owner. The CE in C considered the revised scheme and authorized the proposed modifications to the previously authorised scheme on 23 May 2000.

17. On 8 January 2001, the LegCo Panel on Planning, Lands and Works discussed and supported the proposed road improvement works.

ENVIRONMENTAL IMPLICATIONS

18. We completed an Environmental Impact Assessment (EIA) study in February 1998 to assess the environmental impacts of the construction and

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operation of the entire project. The EIA report concluded that the environmental impacts of the project could be controlled by the implementation of mitigation measures recommended in the EIA report. The key measures to mitigate the predicted long-term impacts include the provision of about 180 m of 3-m high noise barrier for Road L1, and indirect noise mitigation measures in the form of window insulation and air conditioners to an existing kindergarten situated near the junction of Road L1 and Road L2.

19. With these measures, the predicted noise level will be reduced by 1 to 9 dB and will comply with the existing noise control standards. We have included the costs of implementing the noise barrier (\$2.6 million) and indirect noise mitigation measures (\$0.1 million) in the overall project estimate.

20. For short-term impacts during construction, we will control noise, dust and site run-off nuisance in compliance with the established standards/guidelines through the implementation of appropriate monitoring and mitigation measures in the works contract. These measures will include frequent watering of the site and the provision of wheel-washing facilities to reduce the emission of fugitive dust, the use of silent construction plant to reduce noise generation and other procedures as recommended in Environmental Protection Department's Recommended Pollution Control Clauses.

21. We have considered in the planning and design stages ways of minimizing the generation of construction and demolition (C&D) materials by giving due consideration to designing the level and layout of the road works. We estimate that about 18 000 cubic metres (m³) of C&D materials will be generated from the execution of the project. Of these, about 17 960 m³ (99.8%) will be reused as fill in public filling areas and 40 m³ (0.2%) will be disposed of at landfills. No C&D materials can be reused on site.

22. We will require the contractor to submit a waste management plan for approval. The plan will include appropriate mitigation measures to avoid or reduce the production of C&D materials. We will control the disposal of public fill and C&D waste to designated public filling areas and landfills respectively through a trip-ticket system. We will record the disposal of C&D materials for monitoring purposes.

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23. As regards the landscaping works, we will provide about 5 300 square metres (m²) of amenity area along both sides of Roads L1 and L2 and along Tin Ha Road. We will plant about 500 trees and shrubs along the roadside and will use hydroseeding to protect formed slopes as appropriate.

LAND ACQUISITION

24. We will resume about 3.47 hectares of agricultural land and 155 m² of building land for the project. The land acquisition and clearance will affect 157 households involving 505 persons and 518 structures. The Director of Housing will offer eligible families accommodation in public housing in accordance with the established rehousing policy. We will charge the land acquisition and clearance costs, estimated at \$117 million, to Head 701 - Land Acquisition.

BACKGROUND INFORMATION

25. We upgraded **225CL** to Category B in October 1986.

Stage I

26. We upgraded parts of **225CL** to Category A, as **317CL** “YL-TM corridor - engineering works at Hung Shui Kiu, stage I, phase 1, site formation for schools” and **346CL** “YL-TM corridor - engineering works for commercial/residential area at Hung Shui Kiu, stage I, phase 2”, in July 1988 and January 1990 respectively for the implementation of the two phases of the stage I engineering works for Hung Shui Kiu. We completed the stage I works in July 1991. We also upgraded part of **253CL** “YL-TM corridor - engineering works for Hung Shui Kiu and Ping Shan” as **672CL** “Roads and associated engineering works for Hung Shui Kiu North”, which is a related road improvement project in Hung Shui Kiu, to Category A in June 2000 scheduled for completion in February 2003 (coloured yellow on the site plan at Enclosure 1).

Stage II

27. We engaged consultants in January 1996 to carry out an EIA study for the stage II works. The consultants completed the study in February 1998 at a cost of \$0.53 million. We have charged the cost to block allocation **Subhead 7100CX** “New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme.”

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28. As the works agent of the proposed works, the Director of Highways has completed the detailed design and drawings for the proposed roadworks using in-house resources. We will implement the remaining stage II works under **225CL** in phases from 2001 to 2004 for completion from 2004 to 2006.

Job opportunities

29. We estimate that the project will create some 60 jobs comprising 10 professional/technical staff and 50 labourers totalling 1 800 man-months.

Planning and Lands Bureau
February 2001

Enclosure 2 to PWSC(2000-01)92

225CL - Yuen Long - Tuen Mun corridor - engineering works for commercial/residential areas at Hung Shui Kiu, stage II

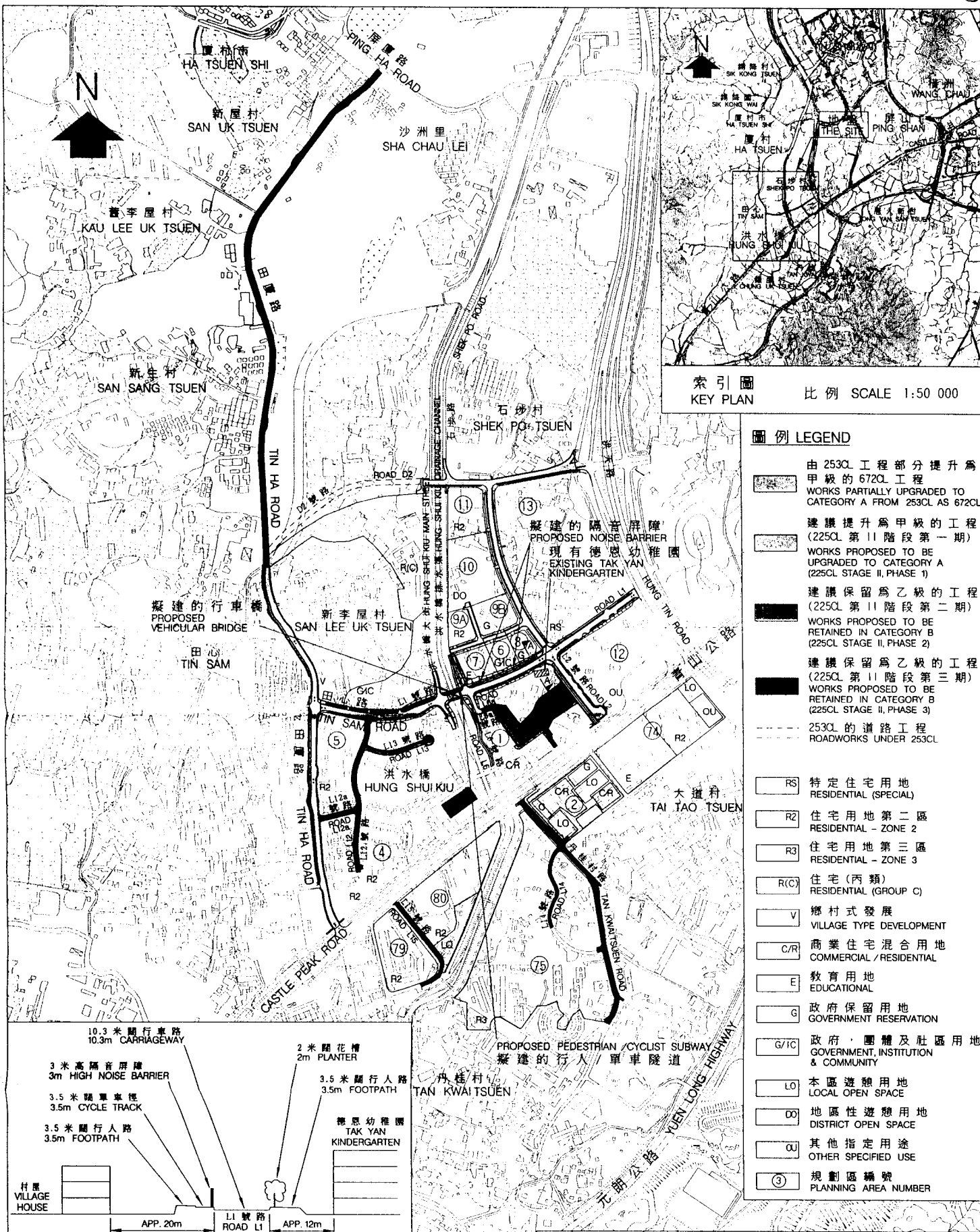
Breakdown of the estimate for consultants' staff costs for EM&A programme

Consultants' staff costs		Estimated man-months	Average MPS* salary point	Multiplier factor	Estimated fees (\$ million)
Impact monitoring and site audit	Professional	2.5	38	2.4	0.3
	Technical	15.0	14	2.4	0.7
Total consultants' staff costs					1.0

* MPS = Master Pay Scale

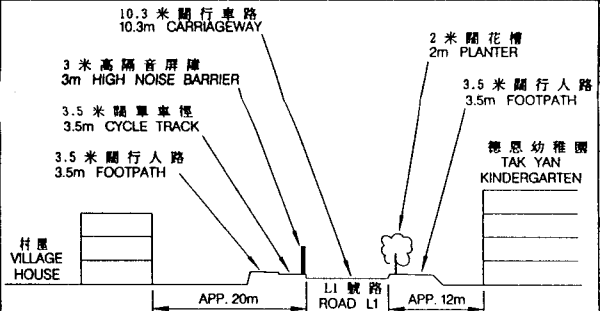
Notes

1. A multiplier factor of 2.4 is applied to the average MPS point to arrive at the full staff costs including the consultants' overheads and profits as the staff will be employed in the consultants' offices. (At 1.4.2000, MPS pt. 38 = \$57,525 p.m. and MPS pt. 14 = \$19,055 p.m.)
2. The figures given above are based on estimates prepared by the Director of Territory Development. We will only know the actual man-months and fees when we have selected the consultants through the usual competitive lump sum fee bid system.



索引圖 KEY PLAN 比例 SCALE 1:50 000

- 圖例 LEGEND**
- 由 253CL 工程部分提升為甲級的 672CL 工程
WORKS PARTIALLY UPGRADED TO CATEGORY A FROM 253CL AS 672CL
 - 建議提升為甲級的工程 (225CL 第 II 階段第一期)
WORKS PROPOSED TO BE UPGRADED TO CATEGORY A (225CL STAGE II, PHASE 1)
 - 建議保留為乙級的工程 (225CL 第 II 階段第二期)
WORKS PROPOSED TO BE RETAINED IN CATEGORY B (225CL STAGE II, PHASE 2)
 - 建議保留為乙級的工程 (225CL 第 II 階段第三期)
WORKS PROPOSED TO BE RETAINED IN CATEGORY B (225CL STAGE II, PHASE 3)
 - 253CL 的道路工程
ROADWORKS UNDER 253CL
 - RS 特定住宅用地
RESIDENTIAL (SPECIAL)
 - R2 住宅用地第二區
RESIDENTIAL - ZONE 2
 - R3 住宅用地第三區
RESIDENTIAL - ZONE 3
 - R(C) 住宅(丙類)
RESIDENTIAL (GROUP C)
 - V 鄉村式發展
VILLAGE TYPE DEVELOPMENT
 - C/R 商業住宅混合用地
COMMERCIAL / RESIDENTIAL
 - E 教育用地
EDUCATIONAL
 - G 政府保留用地
GOVERNMENT RESERVATION
 - G/IC 政府、團體及社區用地
GOVERNMENT, INSTITUTION & COMMUNITY
 - LO 本區遊憩用地
LOCAL OPEN SPACE
 - DO 地區性遊憩用地
DISTRICT OPEN SPACE
 - OU 其他指定用途
OTHER SPECIFIED USE
 - ③ 規劃區編號
PLANNING AREA NUMBER



二〇〇至二〇〇一年度工務小組委員會文件 P.W.S.C. SUBMISSION 2000/2001

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
A	03.02.01	LEGEND REVISED		

修訂 REVISION				
繪圖 drawn	簽署 Initial	日期 date	項目編號 item no.	辦事處 office
K. S. LO	SIGNED	04.01.2001	225CL PHASE 1	新界北拓展處 NEW TERRITORIES NORTH DEVELOPMENT OFFICE
核對 checked	簽署 Initial	日期 date	比例 scale	
Y. F. FUNG	SIGNED	04.01.2001	1:7 500	拓展署 TERRITORY DEVELOPMENT DEPARTMENT
核准 approved	簽署 Initial	日期 date	圖則編號 drawing no.	
C. S. LIU	SIGNED	04.01.2001	NTN 2084A	

圖則名稱 drawing title
元朗至屯門走廊 - 洪水橋商住區工程第 II 階段
YUEN LONG - TUEN MUN CORRIDOR ENGINEERING WORKS FOR COMMERCIAL / RESIDENTIAL AREAS AT HUNG SHUI KIU, STAGE II