

For discussion
on 21 February 2001

PWSC(2000-01)99

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 711 - HOUSING

Civil Engineering - Land development

564CL – Development near Choi Wan Road and Jordan Valley

Members are invited to recommend to Finance Committee the upgrading of **564CL** to Category A at an estimated cost of \$1,779.3 million in money-of-the-day prices to carry out the site formation and associated infrastructure works for the development near Choi Wan Road and Jordan Valley.

PROBLEM

We need to carry out site formation works and provide associated infrastructure to serve the planned development near Choi Wan Road and Jordan Valley in East Kowloon.

PROPOSAL

2. The Director of Civil Engineering (DCE), with the support of the Secretary for Housing and the Secretary for Planning and Lands, proposes to upgrade **564CL** to Category A at an estimated cost of \$1,779.3 million in money-of-the-day (MOD) prices to carry out the site formation and associated infrastructure works for the housing development, seven schools and district open space near Choi Wan Road and Jordan Valley.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of **564CL** comprises –
- (a) formation of about 20 hectares of building platforms for housing development, seven schools, district open space, and associated slopes and retaining walls;
 - (b) about 3 900 metres (m) of roadworks with width ranging from 7.9 m to 16.6 m, including road junction improvement works;
 - (c) five footbridges and two flyovers;
 - (d) about 10 500 m of associated drainage and sewerage works with diameter ranging from 225 millimetres (mm) to 1 800 mm;
 - (e) landscaping works; and
 - (f) environmental mitigation measures, including implementation of an environmental monitoring and audit (EM&A) programme for the works mentioned in paragraphs (a) to (e) above.

A site plan showing the details of the proposed works is at Enclosure 1.

JUSTIFICATIONS

4. A steady and sufficient supply of land for both public and private developments is necessary for meeting housing demand in the long term. In October 1998, we completed the “Planning and Engineering Feasibility Study for Development near Choi Wan Road and Jordan Valley” which confirmed the feasibility of the proposed housing development near Choi Wan Road and Jordan Valley. The development comprises both public and private housing and will accommodate 11 120 flats (6 560 public housing flats and 4 560 private housing flats) with a population of 35 100.

5. The Director of Housing (D of H) plans to start construction of the public housing flats in Site 1 (3 520 flats) and Site 3B (3 040 flats) by mid 2003 and early 2006 respectively. The private residential sites at Site 2 (2 640 flats) and Site 3A (1 920 flats) are planned to be made available for disposal in mid 2004 and mid 2005 respectively. The Director of Education plans to complete the construction of seven schools (comprising two primary schools and five

/secondary

secondary schools) by 2007. To ensure timely formation of sites for these developments, we need to start the construction of the proposed works in July 2001 for completion in stages by mid 2006.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the project to be \$1,779.3 million in MOD prices (see paragraph 7 below), made up as follows -

	\$million	
(a) Site formation and associated slope works (including temporary conveyor belt system of \$40 million)	1,037.2	
(b) Roadworks	56.7	
(c) Bridgeworks	159.8	
(d) Drainage and sewerage works	78.5	
(e) Landscaping works	20.9	
(f) Environmental mitigation measures (including enclosures to temporary conveyor belt system and an EM&A programme)	30.0	
(g) Consultants' fees	78.1	
(i) for construction stage	8.9	
(ii) site staff cost	69.2	
(h) Contingencies	146.0	
Sub-total	1,607.2	(in September 2000 prices)
(i) Provision for price adjustment	172.1	
Total	1,779.3	(in MOD prices)

/Owing

Owing to insufficient in-house resources, DCE proposes to engage consultants to carry out the construction supervision. A breakdown of the estimate for consultants' fees by man-months is at Enclosure 2.

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

Year	\$ million (Sept 2000)	Price adjustment factor	\$ million (MOD)
2001 – 2002	130.4	1.02550	133.7
2002 – 2003	198.6	1.05627	209.8
2003 – 2004	374.6	1.08795	407.5
2004 – 2005	515.9	1.12059	578.1
2005 – 2006	319.6	1.15421	368.9
2006 – 2007	58.5	1.18884	69.5
2007 – 2008	9.6	1.22450	11.8
	1,607.2		1,779.3

8. We have derived the MOD estimate on the basis of the Government's latest forecast of trend labour and construction prices for the period from 2001 to 2008. We will tender the project through standard remeasurement contracts because the quantities of the site formation works and the foundation works of bridges may vary depending on actual ground conditions. The contracts will provide for inflation adjustment because the contract periods will exceed 21 months.

9. We estimate the annually recurrent expenditure arising from this project to be \$10.1 million.

/PUBLIC

PUBLIC CONSULTATION

10. We presented the findings and recommendations of the planning and engineering feasibility study to the Kwun Tong Provisional District Board (KTPDB) in October 1998. Members had no in-principle objection to the project.

11. On 8 March 1999, members of the Environmental Improvement Committee of the KTPDB enquired about the impact of landfill gas from the Jordan Valley Landfill on the housing development. We explained at the meeting that, according to the completed qualitative landfill gas hazard assessment, the Jordan Valley Landfill did not pose a hazard to the development. We also advised members that we would monitor and implement appropriate mitigation works, if necessary, throughout the detailed design stage.

12. We exhibited the relevant draft Outline Zoning Plan (OZP) for public inspection under the Town Planning Ordinance on 28 May 1999. During the two-month exhibition period, a total of 122 objections were received, mainly on traffic impacts and environmental grounds. After giving consideration to the objections, the Town Planning Board decided not to propose any amendments to the draft OZP to meet the objections. The Chief Executive in Council approved the relevant draft OZP on 28 March 2000.

13. We consulted the Kwun Tong District Council (KTDC) on 27 January 2000 before gazetting the roadworks and sewerage works under the Roads (Works, Use and Compensation) Ordinance and Water Pollution Control (Sewerage) Regulation respectively. Whilst the District Councillors had no in-principle objection to the project, some were concerned about the traffic situation in Kwun Tong District as the population built up along with this and other planned developments in the area. We explained that traffic impact assessments had been carried out, and we would provide improvement works to a number of roads and junctions in the area. Implementation of these works would ensure that there would be no adverse traffic impact. A plan showing the location of the proposed road improvement works which will form part of the project is at Enclosure 3.

14. We gazetted the roadworks on 12 May 2000 and received no objection. The roadworks were authorized on 22 September 2000 under the Roads (Works, Use and Compensation) Ordinance. We gazetted the sewerage works on 22 September 2000 and received no objection. The sewerage works were authorized on 22 December 2000 under the Water Pollution Control (Sewerage) Regulation.

15. We consulted the KTDC again on 16 October 2000, and advised them of the outcome of a review of the landfill gas hazard assessment and the design of a conveyor belt system for transporting excavated material from the project site. The results of the hazard assessment review indicated that the risk associated with landfill gas was low, as gas monitoring of the proposed development site indicated no significant migration of landfill gas from the Jordan Valley Landfill. District Councillors reiterated their concerns about the traffic situation in Kwun Tong District before the conveyor belt system was in operation and requested that the conveyor belt system should be in place before transporting excavated materials from the project site. We agreed to examine the possibility of advancing the completion of the conveyor belt. We reported to the Traffic and Transport Committee (TTC) of KTDC on 16 November 2000 and agreed to review the programme for the conveyor belt system and examine the possibility of using some other routes for transporting the excavated materials from the site. We also explained that a traffic impact assessment had been carried out and had concluded that the road system could cope with the traffic generated by the works.

16. We consulted the LegCo Panel on Housing on 8 January 2001. In view of the close proximity of the proposed works to the local residents, Members were concerned about the impacts caused by the construction works. These included the traffic impact in Kwun Tong District before the conveyor belt system was in operation, the disposal of the excavated materials and the blasting operations. We undertook to examine the possibility of using alternative routes other than Ngau Tau Kok Road for transporting the excavated materials from the site, prior to the completion of the conveyor belt system. We would further consult TTC of the KTDC on our proposals. We would also implement a trip-ticket system to control the disposal of the excavated materials. To ensure the safety of the public during blasting operations, we would require the contractor to provide adequate safety measures, including blasting cages and rockfall fences.

17. Members noted that the proposed works would not require land acquisition and asked why the clearance should cost \$0.8 million. We explained that this would cover ex-gratia allowance payable to the eligible cultivators.

18. Members enquired whether the proposed housing site could be designated as a reception site for future redevelopment of the Lower Ngau Tau Kok (LNTK) Estate. We explained that the proposed public housing development would only be completed in 2007 and a decision would not normally be made at this early stage. We have subsequently discussed with D of H the concerns of the LegCo Members on the reception site. We were advised that public rental housing would be considered but it would only be available in 2007 at the earliest.

/However

However, as the LNTK Estate redevelopment was a project under the Housing Authority's Comprehensive Redevelopment Programme (CRP) which was pledged to be completed by 2005, it was not possible to designate the proposed housing site as a reception site without affecting the CRP.

19. We further consulted the TTC of the KTDC on 18 January 2001. We proposed an alternative route via Kwun Tong Road for transporting the excavated material, and explained that a traffic impact assessment had confirmed that the road system could cope with the additional traffic generated. The District Councillors had no in-principle objection to the project, but repeated their earlier concerns. We explained that if we could not use road transport for removal of excavated material, this would result in delay to the completion of the works.

ENVIRONMENTAL IMPLICATIONS

20. The project is a designated project under the Environmental Impact Assessment (EIA) Ordinance. In March 1999, the EIA report for the project was endorsed by the Advisory Council on the Environment (ACE) with a condition that a review on the landfill gas hazard assessment including an additional investigation, particularly on the fault lines, and rigorous monitoring programme should be undertaken by the project proponent; and the EIA Subcommittee should be consulted on the proposed mitigation measures if problems were identified during the investigation. In April 1999, the EIA report for the project was approved under the EIA Ordinance, on the condition that, at the detailed design stage, we would review the landfill gas hazard assessment and reassess the viability, the exact alignment and the impacts of a fully enclosed conveyor belt system for the off-site transfer of construction waste.

21. We reviewed the landfill gas hazard assessment during the detailed design stage, and completed a final critical review in September 2000. The review report concluded that the risk associated with landfill gas was low, as gas monitoring of the proposed development site indicated no significant migration of landfill gas from the Jordan Valley Landfill. We have also reassessed the viability of the conveyor belt system. The revised conveyor belt system as well as its alignment were accepted by the Kwun Tong District Council in October 2000. We shall implement the environmental mitigation measures recommended in the approved EIA report and the review report. These measures include the provision of enclosures to the conveyor belt system and the implementation of an EM&A programme. We estimate the cost of implementing these measures to be \$30 million. We have included this cost in the overall project estimate.

/22.

22. At the planning and design stages, we have considered measures to minimize the generation of construction and demolition (C&D) materials. We will require the contractor to reuse the excavated material as filling material on site as far as possible.

23. We estimate that about 9.3 million cubic metres (Mm³) of C&D materials will be generated by the project. Of these, about 0.4 Mm³ (4.3%) will be reused on site, 8.8 Mm³ (94.6%) will be reused in other construction project sites and 0.1 Mm³ (1.1%) will be disposed of at landfills.

24. We will require the contractor to submit a waste management plan for approval. The waste management plan will include appropriate mitigation measures to reduce, reuse and recycle C&D materials. We will ensure that the day-to-day operations on site comply with the waste management plan approved. To further minimize the generation of C&D materials, we will encourage the contractor to use non-timber formwork and recyclable material for temporary works. We will control the disposal of reusable materials and C&D waste to other designated construction project sites and landfills respectively through a trip-ticket system. The contractor will be required to separate reusable materials from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

LAND ACQUISITION

25. The proposed works do not require any land acquisition. The clearance of government land for the project will not affect any households. We will charge the clearance cost, estimated at \$0.8 million, to Head 701 – Land Acquisition.

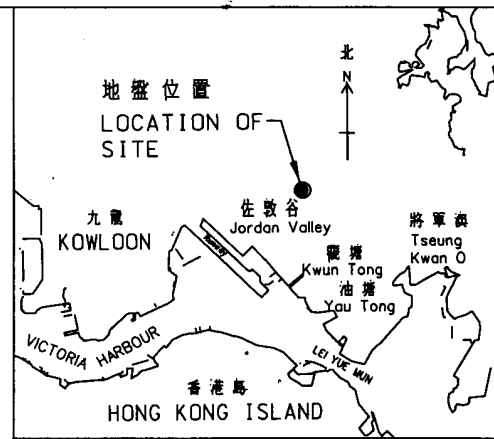
BACKGROUND INFORMATION

26. In June 1997, we upgraded **557CL** “Planning and engineering feasibility study for development near Choi Wan Road and Jordan Valley” to Category A at an estimated cost of \$16 million in MOD prices for engaging consultants to carry out the planning and engineering feasibility study for the proposed development.

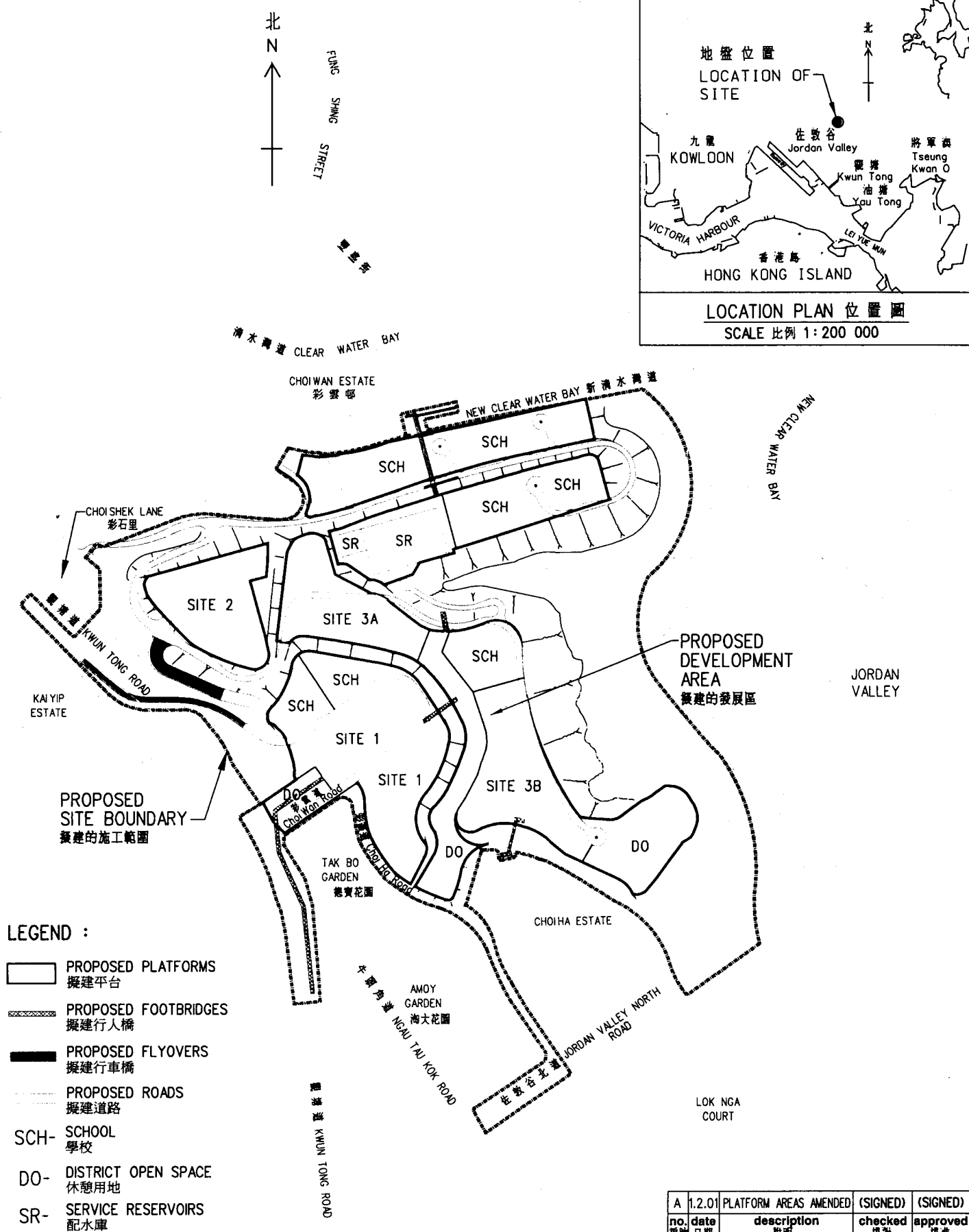
27. In September 1998, we included **564CL** into Category B. In July 1999, we part upgraded **564CL** to Category A as **569CL** “Development near Choi Wan Road and Jordan Valley – consultants’ fees and site investigation” at an estimated cost of \$43.7 million in MOD prices for engaging consultants to carry out detailed design and site investigation work. We have now completed the detailed design for the proposed works.

28. We estimate that the project will create some 710 jobs comprising 120 professional/technical staff and 590 labourers, totalling 37 000 man-months.

Housing Bureau
February 2001



LOCATION PLAN 位置圖
SCALE 比例 1:200 000



- LEGEND :**
- PROPOSED PLATFORMS 擬建平台
 - PROPOSED FOOTBRIDGES 擬建行人橋
 - PROPOSED FLYOVERS 擬建行車橋
 - PROPOSED ROADS 擬建道路
 - SCH- SCHOOL 學校
 - DO- DISTRICT OPEN SPACE 休憩用地
 - SR- SERVICE RESERVOIRS 配水庫

title 圖則名稱
DEVELOPMENT NEAR CHOIWAN ROAD AND JORDAN VALLEY -SITE PLAN
彩雲道及佐敦谷發展計劃 - 工地平面圖

	name 姓名	Initial 簡簽	date 日期
designed 設計	L P LAM	(SIGNED)	28.12.2000
drawn 繪圖	W K WONG	(SIGNED)	28.12.2000
checked 核對	L P LAM	(SIGNED)	28.12.2000
approved 核准	M T LAW	(SIGNED)	28.12.2000

office HOUSING SITES DIVISION
CIVIL ENGINEERING OFFICE
土木工程處 房屋用地部

A	1.2.01	PLATFORM AREAS AMENDED	(SIGNED)	(SIGNED)
no.	date	description	checked	approved
			checked	approved

drawing no. 圖則編號
HSD 42A

scale 比例
1:7 500
OR
AS SHOWN

CIVIL ENGINEERING DEPARTMENT HONG KONG
土木工程署

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Enclosure 2 to PWSC(2000-01)99

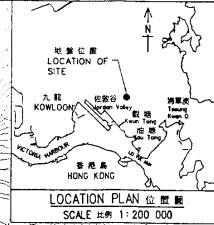
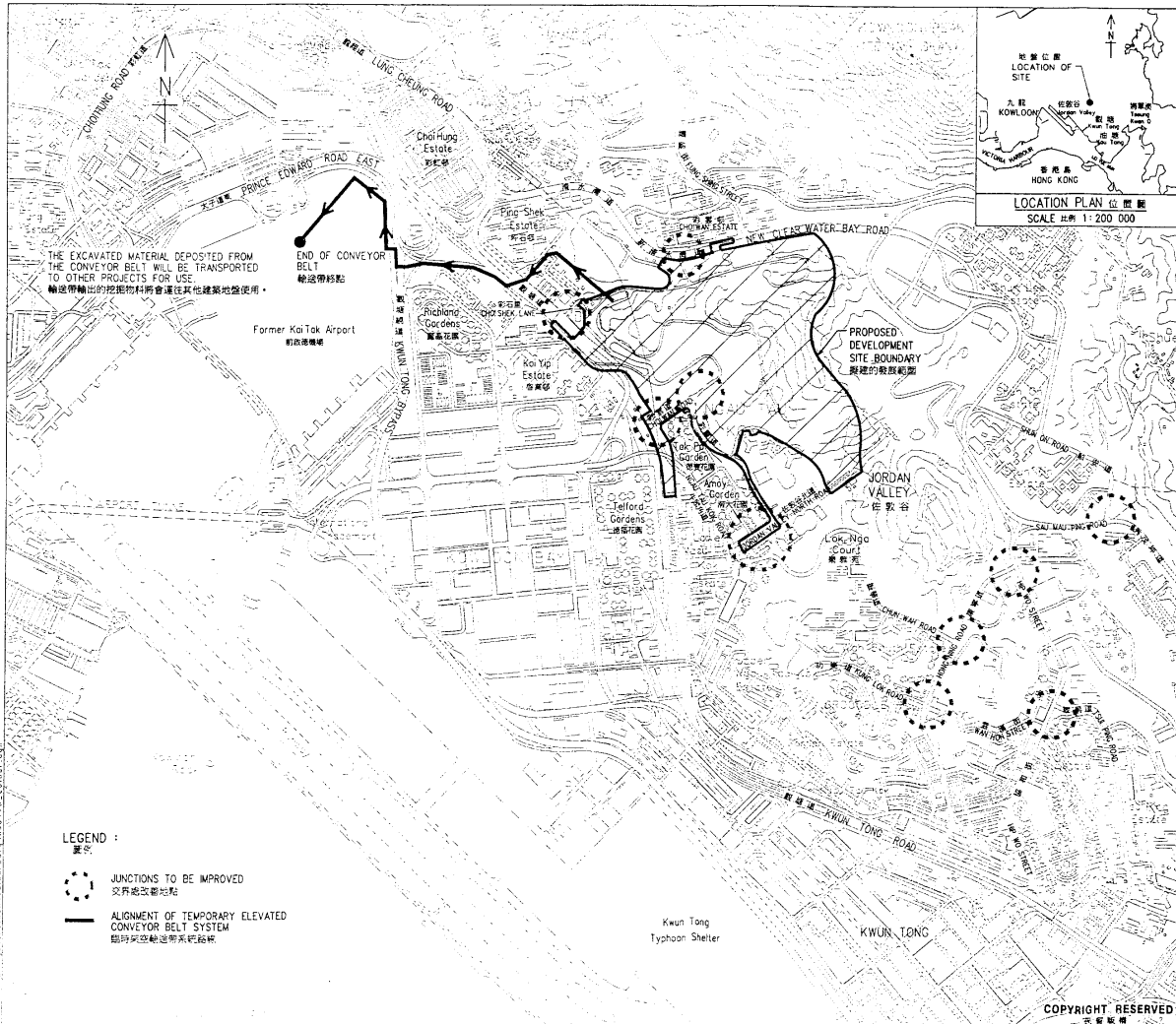
**564CL – Development near Choi Wan Road and Jordan Valley
Breakdown of estimate for consultants' fees**

Consultants' staff costs			Estimated man- months	Average MPS* salary point	Multiplier factor	Estimated fee (\$ million)
(a)	Contract administration	Professional	55.0	38	2.4	7.6
		Technical	29.5	14	2.4	1.3
(b)	Site supervision by resident site staff of the Consultants	Professional	350.0	38	1.7	34.2
		Technical	1080.0	14	1.7	35.0
Total consultants' staff costs						78.1

* MPS = Master Pay Scale

Notes

1. A multiplier factor of 2.4 is applied to the average MPS to arrive at the full staff costs including the consultants' overheads and profit, as the staff will be employed in the consultant's offices. A multiplier factor of 1.7 is applied in the case of site staff supplied by the consultants (At 1.4.2000, MPS pt. 38 = \$57,525 p.m. and MPS pt. 14 = \$19,055 p.m.)
2. The above figures are based on estimates prepared by the Director of Civil Engineering. The consultancy works for this project have been included as part of Agreement No. CE 94/98 "Development near Choi Wan Road and Jordan Valley – Design and construction". The assignment will only be triggered subject to Finance Committee's approval to upgrade **564CL** to Category A.



NOTES 註解

B 01.02.01 LEGEND AMENDED AND NOTES ADDED (SIGNED) (SIGNED)

A 17.01.01 MINOR AMENDMENT TO DRAWING TITLE (SIGNED) (SIGNED)

no.	date	description	checked	approved

REVISION 修訂

name 姓名	initial 簡稱	date 日期
designed 設計	L P LAM	(SIGNED) 16.01.2001
drawn 繪圖	W K WONG	(SIGNED) 16.01.2001
traced 校核	W K WONG	(SIGNED) 16.01.2001
checked 核對	L P LAM	(SIGNED) 16.01.2001

approved 核准
(SIGNED)
SE/HS1

contract no. 合約編號
file no. 檔案編號
project no. 項目編號
contract 合約

drawing title 圖則名稱
DEVELOPMENT NEAR CHOI WAN ROAD AND JORDAN VALLEY-PROPOSED ROAD JUNCTION IMPROVEMENT SCHEMES AND ALIGNMENT OF TEMPORARY CONVEYOR BELT SYSTEM
彩雲道及佐敦谷發展計劃 - 擬建的道路交匯處改善計劃及臨時輸送帶系統的路線

drawing no. 圖則編號
HSD 47B
scale 比例
1:12 500

office 部門
HOUSING SITES DIVISION
CIVIL ENGINEERING OFFICE
土木工程處 房屋用地部

CIVIL ENGINEERING DEPARTMENT
HONG KONG
土木工程署 香港

LEGEND :
圖例

○ JUNCTIONS TO BE IMPROVED
改善的交匯點

— ALIGNMENT OF TEMPORARY ELEVATED CONVEYOR BELT SYSTEM
臨時架空輸送帶系統路線

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