

## **ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE**

### **HEAD 711 - HOUSING Civil Engineering - Land Development 566CL - Development at Anderson Road**

Members are invited to recommend to Finance Committee the upgrading of **566CL** to Category A at an estimated cost of \$3,467.2 million in money-of-the-day prices to carry out the site formation and associated infrastructure works for the development at Anderson Road.

### **PROBLEM**

We need to carry out site formation works and provide associated infrastructure to serve the planned development at Anderson Road (DAR) in East Kowloon.

### **PROPOSAL**

2. The Director of Civil Engineering and Development (DCED), with the support of the Secretary for Transport and Housing, proposes to upgrade **566CL** to Category A at an estimated cost of \$3,467.2 million in money-of-the-day (MOD) prices to carry out the site formation and associated infrastructure works for the development of public housing, other government, institution or community facilities and district open spaces at Anderson Road.

**/PROJECT .....**

**PROJECT SCOPE AND NATURE**

3. The scope of **566CL** comprises –
- (a) formation of about 20 hectares of land platforms and construction of associated slopes and retaining walls;
  - (b) road works of about 4 700 metres (m) in length, including associated footways and road junction improvement works;
  - (c) road bridges, footbridges and pedestrian subway;
  - (d) drainage and sewerage works, including an underground stormwater storage tank;
  - (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.

4. We plan to commence the proposed works in January 2008 for completion in December 2014.

**JUSTIFICATIONS**

5. A steady and sufficient supply of land for housing development is necessary for meeting public housing demand. In October 1998, we completed the “Planning and Engineering Feasibility Study for Development at Anderson Road” (the Study). In January 2007, we conducted a review on the findings of the Study, which confirmed the feasibility of the proposed public housing development at Anderson Road. Upon completion, the proposed development will provide public housing of about 16 100 flats for a population of about 48 000, in phases between 2015 and 2016.

6. To meet the above housing development programme, the Director of Housing plans to start construction of the public housing flats in end 2011. To ensure timely formation of land for the housing development, we need to commence the site formation works in January 2008.

**/FINANCIAL .....**

**FINANCIAL IMPLICATIONS**

7. We estimate the capital cost of the project to be \$3,467.2 million in MOD prices (see paragraph 9 below), made up as follows -

	<b>\$ million</b>	
(a) Earthworks	1,604.2	
(b) Slopes and retaining walls	744.8	
(c) Road works	58.0	
(d) Bridges and subway	232.9	
(e) Drainage and sewerage works	141.3	
(f) Landscaping works	46.7	
(g) Environmental mitigation measures	20.7	
(h) Consultants' fees	219.0	
(i) contract administration	8.0	
(ii) resident site staff costs	201.0	
(iii) EM&A programme	10.0	
(i) Contingencies	242.0	
	Sub-total	3,309.6 (in September 2007 prices)
(j) Provision for price adjustment	157.6	
	Total	3,467.2 (in MOD prices)

8. We propose to engage consultants to undertake contract administration and site supervision of the proposed works and to implement an EM&A programme. A detailed breakdown of the estimates for consultants' fees by man-months is at Enclosure 2.

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

Year	\$ million (Sept 2007)	Price adjustment factor	\$ million (MOD)
2007 – 2008	15.0	1.00000	15.0
2008 – 2009	240.0	1.00750	241.8
2009 – 2010	360.0	1.01758	366.3
2010 – 2011	560.0	1.02775	575.5
2011 – 2012	640.0	1.03803	664.3
2012 – 2013	730.0	1.05619	771.0
2013 – 2014	570.0	1.07732	614.1
2014 – 2015	30.0	1.09886	33.0
2015 – 2016	90.0	1.12084	100.9
2016 – 2017	74.6	1.14326	85.3
	3,309.6		3,467.2

10. We have derived the MOD estimates on the basis of the Government's latest forecast of the trend rate of change in the prices of public sector building and construction output for the period from 2007 to 2017. We tendered the project through a standard remeasurement contract because the quantities of the site formation works and the foundation works of bridges may vary depending on actual ground conditions. The contract will provide for price adjustment because the construction period will exceed 21 months.

11. We estimate the annual recurrent expenditure arising from the project to be about \$9.0 million.

## **PUBLIC CONSULTATION**

12. At the Kwun Tong Provisional District Board and the Sai Kung Provisional District Board meetings in October 1998, we presented the findings and recommendations of the Study (see paragraph 5 above) for the proposed development. Members had no objection in-principle to the development.

13. On 28 May 1999, the draft Kwun Tong (North) Outline Zoning Plan (OZP) of the development was exhibited for public inspection under the Town Planning Ordinance. During the two-month exhibition period, two valid objections mainly on the grounds of high development intensity, traffic impacts and the potential visual impact to the ridgeline of Tai Sheung Tok were received. After giving consideration to the objections, the Town Planning Board decided to propose amendments to the draft OZP to partially meet the objections by subdividing the five “Residential (Group A)” (“R(A)”) zones for the proposed development into seven sub-zones and incorporating maximum building height restrictions for the “R(A)” sub-zones in the Notes of the draft OZP. The Chief Executive in Council approved the OZP on 10 October 2000.

14. At the Kwun Tong District Council (KTDC) meetings on 10 April and 5 June 2000, we presented a proposal of the road and sewerage schemes for the development. Members had no objection in principle to the schemes, but some were concerned about the capacities of the roads in coping with the additional traffic generated. We explained that a traffic impact assessment study was completed, which indicated that with the implementation of improvement works to several road junctions, there would not be any unacceptable impact to the existing road network. A plan showing the locations of the proposed road improvement works, which will form part of the project, is at Enclosure 3.

15. At the Sai Kung District Council (SKDC) meeting on 11 April 2000, we presented a proposal of the road and sewerage schemes for the development. Members had no objection in-principle to the project, but some were concerned about the capacity of road junctions at Clear Water Bay Road/Anderson Road and Po Lam Road/Anderson Road in coping with the additional traffic generated. We explained that with the implementation of proposed improvement works as recommended in the completed traffic impact assessment study, both junctions will have adequate capacity to cater for future traffic demand generated from the proposed development.

16. We gazetted the proposed road works under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) on 22 September 2000. Eight objections were received. After discussions with the objectors, six of them withdrew their objections. The remaining two objectors maintained their objections concerning the resumption of their private land. Having considered these two unresolved objections, the Chief Executive in Council authorised the road scheme on 19 March 2002, with a minor modification to address the concern of one of the objectors. The notice of authorisation was gazetted on 4 April 2002.

17. We gazetted the proposed sewerage works under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) as applied by section 26 of the Water Pollution Control (Sewerage) Regulation on 1 December 2000. One objection was received. After discussions, the objector maintained his objection concerning the resumption of his private land. Having considered the unresolved objection, the Chief Executive in Council authorised the sewerage scheme without modification on 19 March 2002. The notice of authorisation was gazetted on 3 May 2002.

18. At the Kowloon City District Council (KCDC) meeting on 11 July 2002 and the KTDC meeting on 30 July 2002, we presented a proposal for the disposal of surplus excavated materials by trucks during the construction phase of the project. Whilst KTDC members had no objection in-principle to the disposal arrangement, KCDC members expressed concerns about the possible traffic and environmental impacts arising from the disposal operations. We explained that based on the findings of the traffic and environmental assessment studies, the impacts during the construction phase of the project would be acceptable. We assured that appropriate mitigation measures would be implemented to contain the environmental impacts within established standards and guidelines.

19. We consulted the KTDC on 19 January 2006 on the proposed clearance of four temples (Shing Wong Temple, Kwun Yam Temple, Tai Shing Temple and Hoi Kwok Tin Hau Leung Leung Temple) within the development. These temples, which will inevitably be affected by the proposed construction works, are tolerated structures within the project boundary and have no legal right for their reprovisioning upon clearance. Members generally expressed support to the early implementation of the project, but requested the Administration to deal with the temple clearance issue in a legitimate and reasonable manner. Taking into account the long history of these temples, their services provided to the community and strong local support, the Administration agreed to assist the temple operators to relocate the four temples to a nearby site at Po Lam Road, to be formed under the project. The existing temple structures would be cleared in stages in early 2008<sup>1</sup>. At this juncture, the rezoning application for the Po Lam Road site to facilitate the relocation of the four temples is being processed under the Town Planning Ordinance.

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<sup>1</sup> Provision has been made in the site formation and infrastructure contract to allow for late possession of the temple sites and phased commencement of land formation works near the temple areas beyond January 2008.

20. At the KTDC meeting on 15 March 2007, we reported the latest progress of the project including the proposed construction methods, the safety measures for rock blasting and the arrangement for the disposal of surplus excavated materials. Members supported the project, with some expressing concerns about the truck routes for the disposal of surplus excavated materials. At the request of the KTDC, we consulted the Traffic and Transport Committee (T&TC) of the KTDC on 12 April 2007 on the proposed haulage routes. Members had no adverse comment on the proposed disposal arrangement.

21. We consulted the Food and Environmental Hygiene Committee of the KCDC on 12 April 2007 on the proposal of setting up a set of temporary barging points at the former Kai Tak Runway. These barging points serve for the transit of surplus excavated materials generated from the project to other receptor sites by marine transportation. Whilst members had no adverse comment on the proposal, some expressed concerns about the potential environmental impacts on the surrounding areas, including the possible generation of dust and noise during the transit operations. To address their concerns, we advised that the project would not utilise the former Kai Tak Runway for stockpiling purpose, except for a small buffer area within the barging points which was designated for emergency situation only. We also undertook to erect enclosures for the barging points and implement mitigation measures to suppress the generation of dust and noise.

22. We consulted the T&TC of Wong Tai Sin District Council on 29 May 2007 concerning one of the proposed truck routes along New Clear Water Bay Road for the disposal of surplus excavated materials generated from the project. Members had no adverse comment on the proposal.

23. We consulted the Housing Panel of the Legislative Council at its meeting on 5 November 2007. Whilst Members did not raise any objection to the proposed works, some expressed concerns on several aspects of the proposed project, which included the traffic and environmental impacts, and public safety during construction activities.

**/ENVIRONMENTAL .....**

## ENVIRONMENTAL IMPLICATIONS

24. The project is a designated project under Schedule 3 to the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). The proposed road widening works at Po Lam Road, which form part of the project, is also a Schedule 2 designated project under the EIA Ordinance. An EIA report was approved with conditions by Environmental Protection Department (EPD) on 2 March 1999. The report concluded that the environmental impacts of the project could be controlled to within the criteria under the EIA Ordinance and the Technical Memorandum on EIA Process. We will implement the recommendations contained in the approved EIA report, including planting of not less than 13.4 hectares of woodland on soft cut slopes using native species. An Environmental Permit was issued by EPD on 18 June 2002 for the proposed road widening works at Po Lam Road, including improvement to an existing roadside noise barrier.

25. We will require the contractor to implement measures to control noise, dust and site run-off nuisances to within the established standards and guidelines through stipulating suitable provisions in the relevant contract, such as the use of temporary noise barriers and silenced construction plant to reduce noise generation and water-spraying to reduce emission of fugitive dust. We estimate the costs of implementing the environmental monitoring and mitigation measures for the proposed works under the project to be about \$20.7 million (in September 2007 prices). We have included these costs in the project estimates. We will also implement an EM&A programme to ensure timely and effective implementation of the recommended mitigation measures.

26. We have considered the design of the levels and layout of the proposed site formation works, and the levels and alignments of the proposed roads in the planning and design stages to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse suitable excavated materials on site as far as possible, in order to minimise the disposal of inert construction waste to public fill reception facilities<sup>2</sup>. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimise the generation of construction waste.

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<sup>2</sup> Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.



27. We will also require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

28. We estimate that the project will generate in total about 11.4 million tonnes of construction waste. Of these, we will reuse about 1.4 million tonnes (12.3%) of inert construction waste on site and deliver about 10.0 million tonnes (87.6%) of inert construction waste to other projects or public fill reception facilities for subsequent reuse. In addition, we will dispose of about 7 000 tonnes (0.1%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be about \$200 million for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne at landfills<sup>3</sup>).

## HERITAGE IMPLICATIONS

29. This project will not affect all declared monuments, graded historic buildings and sites of archaeological interests.

## LAND ACQUISITION

30. Resumption of private land within the area of the proposed works under the project has been completed and the private lots were reverted to Government on 16 August 2002. The land resumed involves about 9 200 square metres of agricultural land. Site clearance for the project is on-going and involves 76 structures including four temples, and six families with nine persons and agricultural crops. The estimated land acquisition and clearance costs of \$41 million are charged to **Head 701 “Land Acquisition” Subhead 1100CA “Compensation and *ex-gratia* allowances in respect of projects in the Public Works Programme”**. A breakdown of the land resumption and clearance cost is at Enclosure 4. We have reviewed the design of the project to minimise the land acquisition cost. The cost is considered justified as the area of land resumed and to be cleared is required for construction of roads, public housing, other government, institution or community facilities and district open spaces.

**/BACKGROUND .....**

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<sup>3</sup> 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<sup>3</sup>), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

**BACKGROUND INFORMATION**

31. In June 1997, we upgraded **556CL** “Planning and engineering feasibility study for development at Anderson Road” to Category A at an estimated cost of \$18.7 million in MOD prices for engaging consultants to carry out the planning and engineering feasibility study for the proposed development.

32. In September 1998, we included **566CL** into Category B. In July 1999, we part upgraded **566CL** to Category A as **568CL** “Development at Anderson Road – consultants’ fees and site investigation” at an estimated cost of \$57.5 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.

33. Of the about 4 470 trees within the project boundary, about 1 760 trees will be preserved. The proposed site formation and associated infrastructure works for DAR will involve the removal of about 2 710 trees including about 2 670 trees to be felled and 40 trees to be transplanted within the project site. All the trees to be removed are not important trees<sup>4</sup>. We will incorporate planting proposal as part of the project, including estimated quantities of 50 000 trees and 20 000 shrubs.

34. We estimate that the project will create about 1 135 jobs (920 for labourers and another 215 for professional/technical staff) providing a total employment of 74 000 man-months.

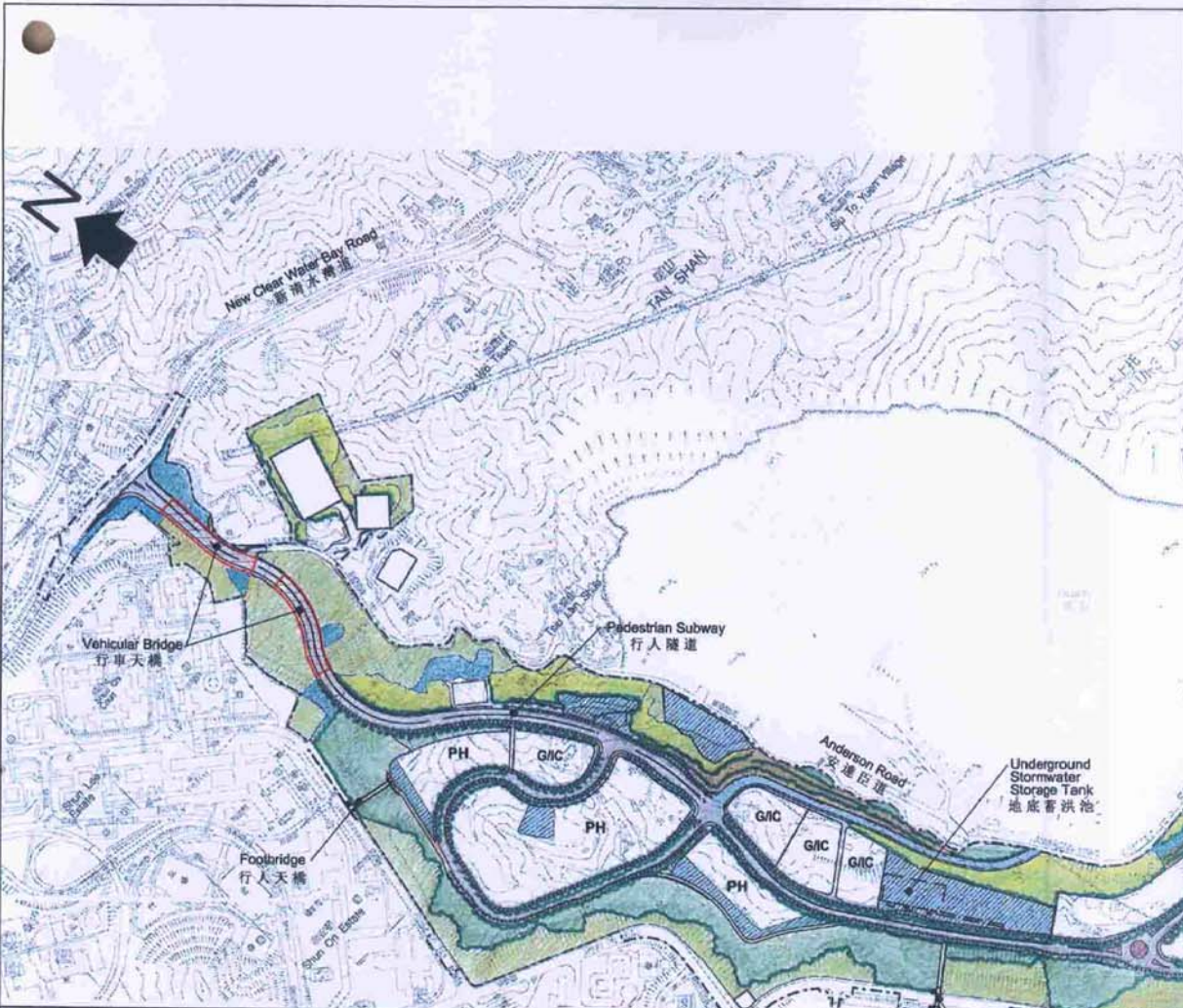
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Transport and Housing Bureau  
November 2007

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<sup>4</sup> “Important trees” refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria -

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 m (measured at 1.3 m above ground level), or with height/canopy spread equal or exceeding 25 m.



**Legend:**  
圖例

	Site Boundary 地盤範圍		Woodland Mix Planting Buffer 樹林屏障
	Proposed Planting at Soil Cut Slope 本土林地種植 (削土坡)		Roadside Tree Planting 街道植樹
	Proposed Planting at Rock Cut Slope 斜坡綠化種植 (削石坡)		Hydroseeding at Slope 斜坡噴草綠化
	Existing Slopes 原有斜坡		Landscape Soft Works 觀賞美化植物
			Proposed District Open Space 擬議地區休憩用地
<b>G/C</b>	Government, Institution or Community Site 政府、機構或社區用地	<b>PH</b>	Proposed Public Housing Site 擬建公共房屋地點

	姓名 Name	簽署 Initial	日期 date
繪圖 drawn	W.S. MAK	SIGNED	14 SEPT 2007
核對 checked	L.P. LAM	SIGNED	14 SEPT 2007
核准 approved	C.B. YUNG	SIGNED	14 SEPT 2007

2007年至2008年年度工務小組委員會文件  
PWSC Submission 2007 - 2008

項目編號 Item no.	566 CL
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圖則名稱 drawing title

安達臣道發展計劃：  
總平面圖  
Anderson Road Development :  
General Layout Plan

圖則編號 drawing no.	24711/SK/259	比例 scale	N.T.S.
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辦事處 office  
土木工程處  
CIVIL ENGINEERING OFFICE

土木工程拓展署  
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

## 566CL – Development at Anderson Road

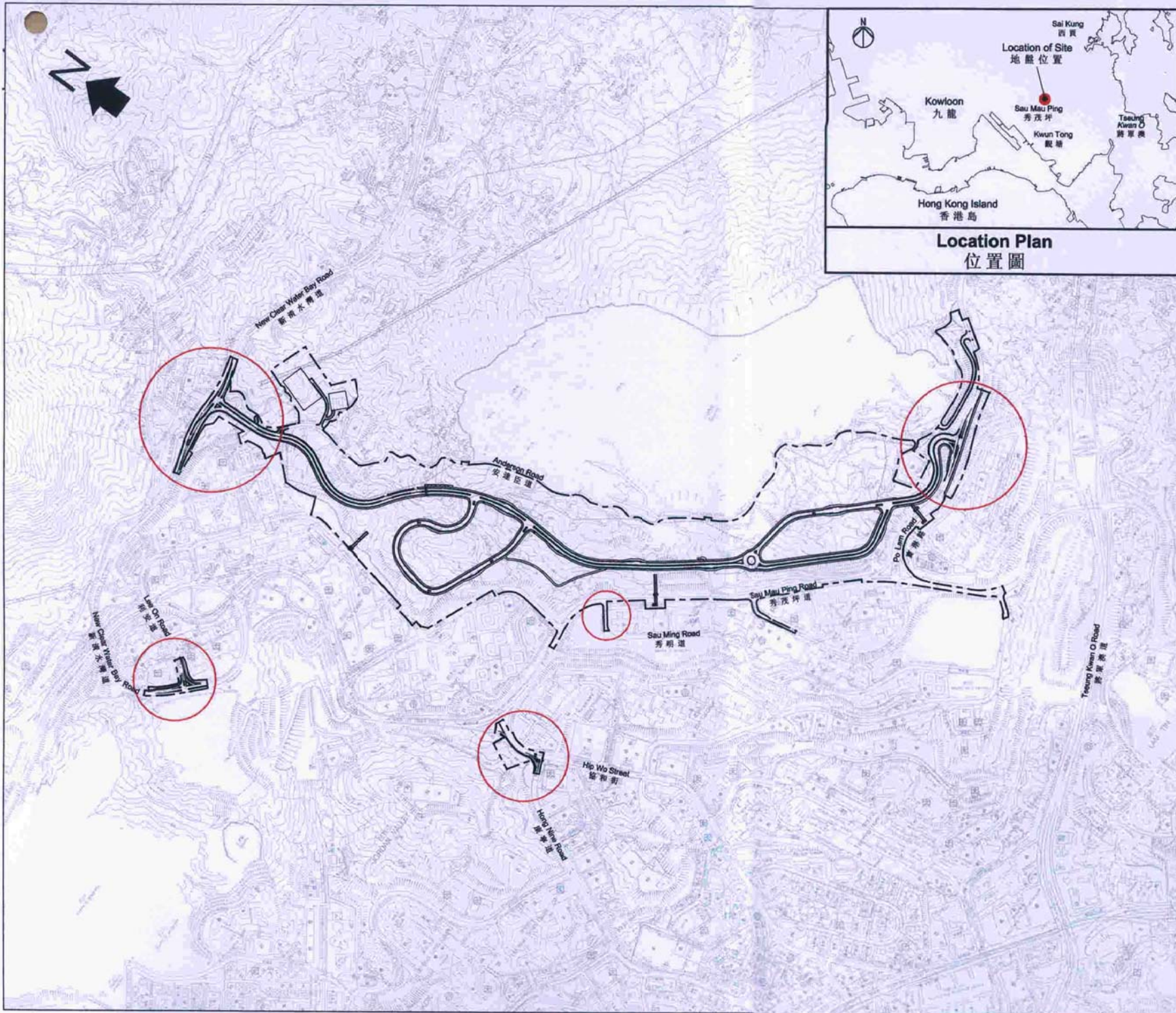
## Breakdown of the estimate for consultants' fees (in September 2007 prices)

Consultants' staff costs		Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Contract administration (Note 2)	Professional	-	-	-	7.0
	Technical	-	-	-	1.0
(b) Resident site staff (Note 3)	Professional	882	38	1.6	80.4
	Technical	4 000	14	1.6	120.6
(c) Environmental monitoring and audit (EM&A) programme (Note 3)	Professional	35	38	2.0	4.0
	Technical	160	14	2.0	6.0
<b>Total</b>					219.0

\* MPS = Master Pay Scale

## Notes

1. A multiplier of 1.6 is applied to the average MPS point to arrive at the cost of resident site staff supplied by the consultants (As at 1 April 2007, MPS point 38 = \$56,945 per month and MPS point 14 = \$18,840 per month). A multiplier of 2.0 is applied to the average MPS point to arrive at the cost of staff supplied by the consultants in carrying out the EM&A programme.
2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the provision of contract administration for **566CL**. The assignment will only be executed subject to Finance Committee's approval to upgrade **566CL** to Category A.
3. The consultants' staff costs for site supervision and EM&A programme are based on the estimates prepared by the Director of Civil Engineering and Development. We will only know the actual man-months and actual fees after completion of the works.



**圖例 LEGEND:**

- 地盤範圍  
Site Boundary
- 擬建道路交界處改善工程的位置  
Location of Proposed Road Junction Improvement Works

	姓名 Name	簽署 Initial	日期 date
繪圖 drawn	W.S. MAK	SIGNED	14 SEPT 2007
核對 checked	L.P. LAM	SIGNED	14 SEPT 2007
核准 approved	C.B. YUNG	SIGNED	14 SEPT 2007

2007年至2008年年度工務小組委員會文件  
PWSC Submission 2007 - 2008

項目編號 Item no.	566 CL
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圖則名稱 drawing title

**安達臣道發展計劃：  
道路交界處改善工程位置圖**

**Anderson Road Development :  
Location of Proposed Road  
Junction Improvement Works**

圖則編號 drawing no.	24711/SK/258	比例 scale	1:10 000
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辦事處 office

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**566CL - Development at Anderson Road****Breakdown of the land resumption and clearance costs**

	<b>\$ million</b>
<b>Estimated land resumption cost</b>	<b>36.9</b>
(a) Agricultural Land Ex-gratia Compensation (including whole or portions of 39 lots of private land) - 9,186 m <sup>2</sup> @ \$4,018/ m <sup>2</sup> Note 1	36.9
<b>Estimated clearance cost</b>	<b>2.8</b>
(a) Ex-gratia allowance for clearance	2.5
(b) Ex-gratia allowance for removal of grave	0.3
<b>Estimated compensation for creation of easement</b>	<b>1.3</b>
(a) Creation of easement required under Roads (Works, Use and Compensation) Ordinance	1.3
<b>Total costs</b>	<b>41.0</b>

## Notes :

- All the land resumed in the project **566CL** was agricultural land in New Kowloon. The ex-gratia compensation rate for agricultural land in New Kowloon is the same as that for agricultural land in New Territories for Zone "A", which is 120% of the Basic Rate for agricultural land in New Territories. The Basic Rate was \$311 per square foot (or \$3,348 per m<sup>2</sup>) at the time when estimating the land resumption costs in 2002.
- There are four ex-gratia compensation zones, namely Zones A, B, C and D, for land resumption in the New Territories as approved by ExCo in 1985 and 1996. The boundaries of these zones are shown on the Zonal Plan for Calculation of Compensation Rates.