

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

### **HEAD 705 - CIVIL ENGINEERING**

#### **Civil Engineering - Land Development**

#### **660CL - Site formation, construction of associated infrastructure and provision of government, institution and community facilities for an international theme park on Lantau Island**

Members are invited to recommend to Finance Committee –

- (a) the upgrading of part of **660CL**, entitled “Infrastructure for Penny’s Bay Development, Package 2”, to Category A at an estimated cost of \$3,917 million in money-of-the-day prices; and
- (b) the retention of the remainder of **660CL** in Category B.

### **PROBLEM**

We need to provide the necessary infrastructure and government, institution and community (GIC) facilities to support the development of Hong Kong Disneyland (HKD) at Penny’s Bay on Lantau Island.

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## PROPOSAL

2. The Director of Civil Engineering (DCE), with the support of the Secretary for Economic Services, proposes to upgrade part of **660CL** to Category A at an estimated cost of \$3,917 million in money-of-the-day (MOD) prices for the construction of infrastructure and associated works to serve HKD Phase 1.

## PROJECT SCOPE AND NATURE

3. The scope of the part of **660CL** which we now propose to upgrade to Category A comprises -

- (a) dredging and reclamation works for the formation of about 10 hectares (ha) of land at Yam O;
- (b) construction of a dual-2 lane/dual-3 lane carriageway (namely Road P2) about 2.2 kilometres (km) in length (including minor roads and a subway), reprovisioning of access to an existing power station, and the associated slope and drainage works;
- (c) construction of West Resort Road about 1.8 km in length including minor roads/paving area, and the associated slope and drainage works;
- (d) construction of a temporary access road and site formation for a utilities reserve;
- (e) construction of a central pedestrian walkway about 900 metres in length including an underpass;
- (f) construction of an at-grade public transport interchange at the proposed rail station at Yam O;
- (g) construction of an at-grade Penny's Bay public transport interchange (PBPTI) near the proposed Penny's Bay Rail Station including a public access deck over the Station;
- (h) construction of two public piers;
- (i) construction of hard and soft landscape works including landscape berms, a maintenance depot for soft landscape works, roadside planting and about 10 ha of woodland planting;

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- (j) construction of part of a public water recreation centre to the south of the future Chok Ko Wan Link Road (CKWLR) with a lake of about 12 ha including the associated water supply and irrigation system;
- (k) construction of a sewerage network from Penny's Bay to Yam O;
- (l) construction of a stormwater drainage system including box culverts about 4.6 km in length and the Western Channel about 2.1 km in length, as well as the associated site formation and geotechnical works;
- (m) construction of water supply systems for fresh water and salt water from Yam O to Penny's Bay;
- (n) construction of a refuse collection point as one of the GIC facilities;
- (o) removal of asbestos containing materials within the area of Cheoy Lee Shipyard;
- (p) environmental monitoring for the proposed works;
- (q) employment of an Independent Environmental Checker (IEC) to audit the environmental monitoring works and a consultant to operate an Environmental Project Office (ENPO);
- (r) employment of consultants for site supervision of the proposed works and certifying completion of the infrastructure works and GIC facilities undertaken by Government in relation to the development of HKD Phase 1; and
- (s) employment of project specific, temporary staff in the Civil Engineering Department (CED) for the delivery of projects in relation to the development of HKD Phase 1.

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A site plan showing the details of the proposed works is at Enclosure 1. We intend to start the proposed works in November 2001 for completion in phases by October 2005.

4. The remaining works of 660CL to be retained in Category B include –

- (a) dredging and reclamation works for the remaining Penny's Bay Reclamation (80 ha);
- (b) investigation, design and construction of the remaining associated infrastructure and landscaping works;
- (c) construction of the remaining section of Road P2;
- (d) construction of the remaining part of the water recreation centre;
- (e) construction of the remaining water supply system for the lake in the water recreation centre;
- (f) construction of sewerage works from Siu Ho Wan sewage treatment plant to Yam O;
- (g) construction of a salt water supply system from Tai Ho to Yam O;
- (h) construction of GIC facilities for HKD Phase 1 including a police post and a fire/ambulance station;
- (i) decommissioning of Cheoy Lee Shipyard and construction of all infrastructure works within the Cheoy Lee Shipyard site;
- (j) environmental monitoring for the remaining works; and
- (k) provision for site supervision of the remaining works.

#### JUSTIFICATION

5. Government entered into an agreement with The Walt Disney Company and Hongkong International Theme Parks Limited (HKITP) in December 1999 for the development of HKD Phase 1. To implement the agreement and support the development of HKD, Government has to provide a fully formed and serviced site on reclaimed land at Penny's Bay, associated and supporting infrastructure and GIC facilities. According to the agreed implementation

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programme for the project, we should invite tenders for the first infrastructure contract in Penny's Bay in June 2001 for commencement in November 2001 in order to enable HKD Phase 1 to open in 2005. Failure to achieve the above milestone will put the project timetable at risk and lead to deferment of the economic benefits that will be derived from the operation of the theme park.

6. As the Environmental Impact Assessment (EIA) study for the decommissioning of Cheoy Lee Shipyard (the Shipyard) will not be completed until early 2002, infrastructure works that fall within the area of the Shipyard will be carried out in the second infrastructure contract to commence in mid 2002. However, as suspected asbestos containing materials have been identified in preliminary investigations at the Shipyard, we propose to remove the asbestos containing materials first under the first infrastructure contract for completion before mid 2002. This would enable the decommissioning work to commence at the beginning of the second infrastructure contract to ensure timely completion of all infrastructure works.

7. We will implement an Environmental Monitoring and Auditing (EM&A) programme for the proposed construction works in accordance with the requirements set out in the approved EIA report on "Construction of an international theme park in Penny's Bay of North Lantau and its essential associated infrastructures" and the Environmental Permits issued in April 2000. The EM&A programme includes implementation of environmental monitoring works, employment of an IEC to audit the monitoring works, and establishment of an ENPO to oversee and audit the possible cumulative environmental impacts arising from the developments in Northeast Lantau. To ensure a consistent approach, the IEC will also audit the monitoring works for all construction works undertaken by Government in relation to the development of HKD from 2001 to 2006.

8. The PBPTI and central pedestrian walkway referred to in paragraphs 3(g) and 3(e) above are in the immediate vicinity of HKITP's works including the carparks and retail, dining and entertainment facilities, the construction of which will be concurrent with Government's works. In order to minimize interfacing problems, it is advantageous to have a single party carry out the construction work in that area. As the PBPTI and central pedestrian walkway are the main gateway to the theme park, their design should be compatible with the overall theming of the park so as to create a sense of arrival and anticipation. To achieve an integrated landscape and aesthetic design and to minimize interfacing problems, we intend to entrust to HKITP the design, construction, supervision and completion certification of the PBPTI and central pedestrian walkway but excluding the structural works of the public access deck and the underpass. The underpass needs to be constructed in conjunction with the utilities works co-ordinated by the Government.

9. Part of the PBPTI takes the form of a deck which runs over the Penny's Bay Railway Station and provides access to the central pedestrian walkway for visitors arriving by vehicle. As this public access deck falls within the Penny's Bay Railway Station to be constructed by the railway operator, we intend to entrust the design, construction and supervision of its structural works to the railway operator in order to minimize interfacing and site possession problems during construction.

10. The CED staff responsible for the HKD project are already fully committed in terms of workload. The latter will continue to build up when the proposed infrastructure works progress to the construction stage. It is therefore necessary to deploy additional, temporary staff resources to cope with the increasing workload. In this regard, we propose to employ non-civil service contract (NCSC) staff for four years from July 2001. We are currently reviewing the need for additional staff resources for DCE for implementation of the HKD project.

#### FINANCIAL IMPLICATIONS

11. We estimate the capital cost of the project to be \$3,917 million in MOD prices (see paragraph 12 below), made up as follows –

	<b>\$ million</b>
(a) Dredging and reclamation at Yam O	211
(b) Road P2, reprovisioning of access to an existing power station and minor roads	302
(c) West Resort Road and minor road/paved area	165
(d) Temporary access road and site formation	97

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	<b>\$ million</b>
(e) Central pedestrian walkway	320
(i) Central pedestrian walkway including construction supervision and completion certification costs (to be entrusted to HKITP) <sup>1</sup>	300
(ii) Underpass	20
(f) Public transport interchange at Yam O	65
(g) PBPTI	218
(i) PBPTI including construction supervision and completion certification costs (to be entrusted to HKITP) <sup>2</sup>	188
(ii) Structural works for public access deck including construction supervision costs (to be entrusted to the railway operator) <sup>3</sup>	30
(h) Two public piers	212

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<sup>1</sup> The estimated cost includes about \$26 million on-costs for construction supervision and completion certification, equivalent to 9.5% of the construction cost.

<sup>2</sup> The estimated cost includes about \$16 million on-costs for construction supervision and completion certification, equivalent to 9.5% of the construction cost.

<sup>3</sup> The estimated cost includes about \$2.6 million on-costs for construction supervision, equivalent to 9.5% of the construction cost.

	<b>\$ million</b>	
(i) Landscape works	517	
(j) Part of a public water recreation centre including water supply and irrigation systems	279	
(k) Sewerage networks	145	
(l) Stormwater drainage system	561	
(m) Fresh and salt water supply systems	116	
(n) Refuse collection point	3	
(o) Removal of asbestos containing materials in Cheoy Lee Shipyard	6	
(p) Environmental monitoring works	12	
(q) Consultants' fees for -	334	
(i) Construction supervision including provision of resident site staff and certification of completed works	292	
(ii) environmental auditing by the IEC	22	
(iii) operation of the ENPO	20	
(r) Employment of NCSC staff	26	
(s) Contingencies	357	
Sub-total	3,946	(in September 2000 prices)

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		<b>\$ million</b>
(t)	Provision for price adjustment	(29)
	Total	<u>3,917</u> (in MOD prices)

Due to insufficient in-house resources, DCE proposes to engage consultants to carry out the construction supervision, completion certification, auditing of environmental monitoring works and operation of the ENPO. A breakdown by man-months of the estimates for consultants' fees is at Enclosure 2.

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

<b>Year</b>	<b>\$ million (Sept 2000)</b>	<b>Price Adjustment Factor</b>	<b>\$ million (MOD)</b>
2001 – 2002	153	0.98000	150
2002 – 2003	826	0.97976	809
2003 – 2004	979	0.98759	967
2004 – 2005	1,017	0.99549	1,012
2005 – 2006	585	1.00346	587
2006 – 2007	246	1.01149	249
2007 – 2008	140	1.01958	143
	<u>3,946</u>		<u>3,917</u>

13. We have derived the MOD estimates on the basis of Government's latest forecast of trend labour and construction prices for the period 2001 to 2008. We will tender the civil engineering works, apart from the proposed entrustment works, under three contracts - other than the first infrastructure contract referred to in paragraph 5, there will be another contract for the public transport interchange at Yam O and one other for the two piers. The public transport

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interchange at Yam O will be a lump sum contract as quantities of major items can be determined at the design stage. The remaining two contracts will be of standard re-measurement type as the actual quantities of major items for dredging, filling, piling and foundation works, slope works and drainage works cannot be accurately determined at the design stage. For the employment of consultant for construction supervision, we intend to exercise an option in an existing consultancy agreement for design and construction of infrastructure for Penny's Bay development requiring the consultant to provide site staff for the purpose. The consultant for this agreement was selected through the usual competitive lump sum fee system. We will select the IEC and the consultant for operation of the ENPO through the normal competitive lump sum fee arrangement. The infrastructure contracts (except the public transport interchange at Yam O) and the consultancy agreements will have provisions for inflation adjustment as the duration of the contract and consultancy agreements will exceed 21 months and 12 months respectively.

14. We estimate the annually recurrent expenditure upon full completion of this project to be \$69.5 million.

## **PUBLIC CONSULTATION**

15. The project is based on the Recommended Outline Development Plan for the Theme Park and Northshore Lantau Development which was generally supported by the Tsuen Wan District Council (TWDC) and Islands District Council (IsDC) during consultation in March 2000 and endorsed by the Committee on Planning and Land Development at its meeting on 6 July 2000. We presented the proposed roadworks to IsDC on 22 May 2000 and circulated an information paper on the proposed roadworks to TWDC in June 2000. Members of the two District Councils made no comment on the proposal. We consulted IsDC and TWDC again on 25 and 26 September 2000 respectively on the proposed sewerage scheme and land resumption for Penny's Bay Development. Members supported the proposed sewerage scheme and land resumption.

16. We gazetted the proposed roadworks in two road schemes under the Roads (Works, Use and Compensation) Ordinance on 21 July 2000. Four objections were received. These related to the resumption of land, the creation of easements and land affected by the roadworks. We met with the objectors to try to resolve the objections. As a result, one objector has conditionally withdrawn his objection. The other three objections remained unresolved. We obtained the Chief Executive in Council's authorization of the proposed road schemes in January 2001 and gazetted the authorization on 23 January 2001.

17. We gazetted the proposed sewerage works under the Roads (Works, Use and Compensation) Ordinance as applied by section 26 of the Water Pollution Control (Sewerage) Regulation on 29 September 2000. One objection was received. The objector was opposed to the sewerage scheme as it would mean the resumption of his land. We met with the objector but the objection remained unresolved. We obtained the Chief Executive in Council's authorization of the proposed sewerage scheme in April 2001 and we gazetted the authorization on 20 April 2001.

18. On 23 April 2001 we briefed the Legislative Council Panel on Economic Services on the proposed works under "Infrastructure for Penny's Bay Development, Package 2". Members of the Panel took note of the proposed works. We also briefed the Legislative Council Panel on Planning, Lands and Works on 7 May 2001. Members of the Panel expressed concern that the proposed reclamation works at Yam O might lead to fish kill in nearby fish culture zones. Members were also concerned that most of the proposed civil engineering works would only be carried out under one single contract. Having considered the views of Members, we have critically reviewed the proposed works. We will now implement the proposed works, excluding the entrustment works, under three contracts as reflected in paragraph 13 of this paper. We have provided a written response on 14 May 2001 to questions raised by Members of the Panel. A copy of our response is attached at Enclosure 3.

## **ENVIRONMENTAL IMPLICATIONS**

19. The proposed works include designated projects under the Environmental Impact Assessment Ordinance (EIAO). In March 2000 we completed an EIA study on "Construction of an international theme park in Penny's Bay of North Lantau and its essential associated infrastructures" which covered the proposed works and another EIA study under "Northshore Lantau Development Feasibility Study" which addressed the overall cumulative impacts in North-East Lantau region. The EIA studies concluded that the proposed works would meet established environmental standards and legislation after implementation of the recommended mitigation measures in the construction and operation stages. The two EIA reports were endorsed with conditions by the Advisory Council on the Environment on 17 April 2000 and approved by the Director of Environmental Protection on 28 April 2000.

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20. We will implement the recommended environmental mitigation measures by incorporating them into the works contract. The key measures include control on the rates and methods of reclamation for Yam O Reclamation, at least 6 ha of compensatory tree planting, erection of fences to protect rare/restricted/protected plant species, construction of sewage pumping stations with backup facilities and odour control, provision of oil interceptors at public transport interchanges and landscape works on the earth berms. We will also incorporate into the works contract standard measures to control pollution during construction. We will establish an ENPO to monitor the cumulative environmental effects of all concurrent construction projects in the North-East Lantau area. The costs of implementing the recommended environmental mitigation measures (\$310 million) and the EM&A programme (\$54 million) including establishment of the ENPO (\$20 million), employment of IEC (\$22 million) and environmental monitoring works (\$12 million) have been included in the overall project estimate.

21. At the planning and design stages of the project, we have given due consideration to minimizing the generation of construction and demolition (C&D) materials. To further minimize the generation of C&D materials, we will encourage the contractors to use steel instead of timber in formwork and temporary works.

22. We estimate that about 2.68 million cubic metres (m<sup>3</sup>) of C&D materials will be generated by this project. Of these, about 1.22 million m<sup>3</sup> (45.5%) will be reused on site, about 1.41 million m<sup>3</sup> (52.6%) will be reused in the second infrastructure contract, and 0.05 million m<sup>3</sup> C&D waste (1.9%) will be disposed of at landfills. The reclamation works at Yam O will receive 0.7 million m<sup>3</sup> of public fill. We will require contractors to submit waste management plans to Environmental Protection Department (EPD) for approval. The waste management plans will describe the arrangements for avoidance, reuse, recovery and recycling, storage, collection, treatment and disposal of different categories of waste generated from the construction activities, and will include recommended mitigation measures for construction waste management, including designation of areas for segregation and temporary storage of reusable and recyclable materials. We will ensure that the day-to-day operations on site comply with the approved waste management plans. We will implement a trip-ticket system to control the proper disposal of C&D materials and will record the reuse, recycling and disposal of C&D materials for monitoring purposes.

23. We estimate that the reclamation works at Yam O will produce 1.8 million m<sup>3</sup> of uncontaminated marine mud. There will be sufficient capacity in designated areas for disposal of this mud. No contaminated mud will be generated from the project.

24. Regarding the removal and disposal of asbestos containing materials in Cheoy Lee Shipyard, we will fully comply with the statutory requirements of the EIAO and Air Pollution Control Ordinance including submission to EPD for approval of an Asbestos Investigation Report and Asbestos Abatement Plan. We will also consult the Advisory Council on the Environment before commencement of the removal works.

## LAND ACQUISITION

25. We will resume 0.45 ha of private land and create an easement over the MTRCL lot under the Roads (Works, Use and Compensation) Ordinance. We have acquired a further 18.7 ha of land by voluntary surrender. We will also require clearance works on government land. We have reserved the land acquisition and clearance cost estimated at \$1,520 million under Head 701 – Land Acquisition.

## BACKGROUND INFORMATION

26. We upgraded **660CL** to Category B in November 1999. On 26 November 1999, Finance Committee agreed to accept in principle the financial implications, estimated at \$13.569 billion in September 1999 prices, for the site formation, construction of associated infrastructure and the provision of Government, institution and community facilities in connection with the development of an international theme park on Lantau Island. The proposed works are part of the \$13.569 billion mega project.

27. We funded the EIA study under “Northshore Lantau Development Feasibility Study” under PWP item **108AP** at a cost of \$7.0 million and the EIA study for “Construction of an international theme park in Penny’s Bay of North Lantau and its essential associated infrastructures” under block allocation **Subhead 5101CX** “Civil engineering works, studies and investigations for items in Category D of the Public Works Programme” at a cost of \$7.8 million.

28. On 17 December 1999, Finance Committee approved the upgrading of part of **660CL** to Category A as **662CL** entitled “Reclamation of Penny’s Bay Stage 1 works, design of site formation at Yam O and design of associated infrastructure and government, institution and community facilities for the development of Hong Kong Disneyland Phase 1 on Lantau Island” at an estimated cost of \$6,923.9 million in MOD prices. We commenced the reclamation works in May 2000 for completion in phases from November 2001 to January 2003. We commissioned a consultancy for the infrastructure design in April 2000 and completed the detailed design of the proposed works in May 2001.

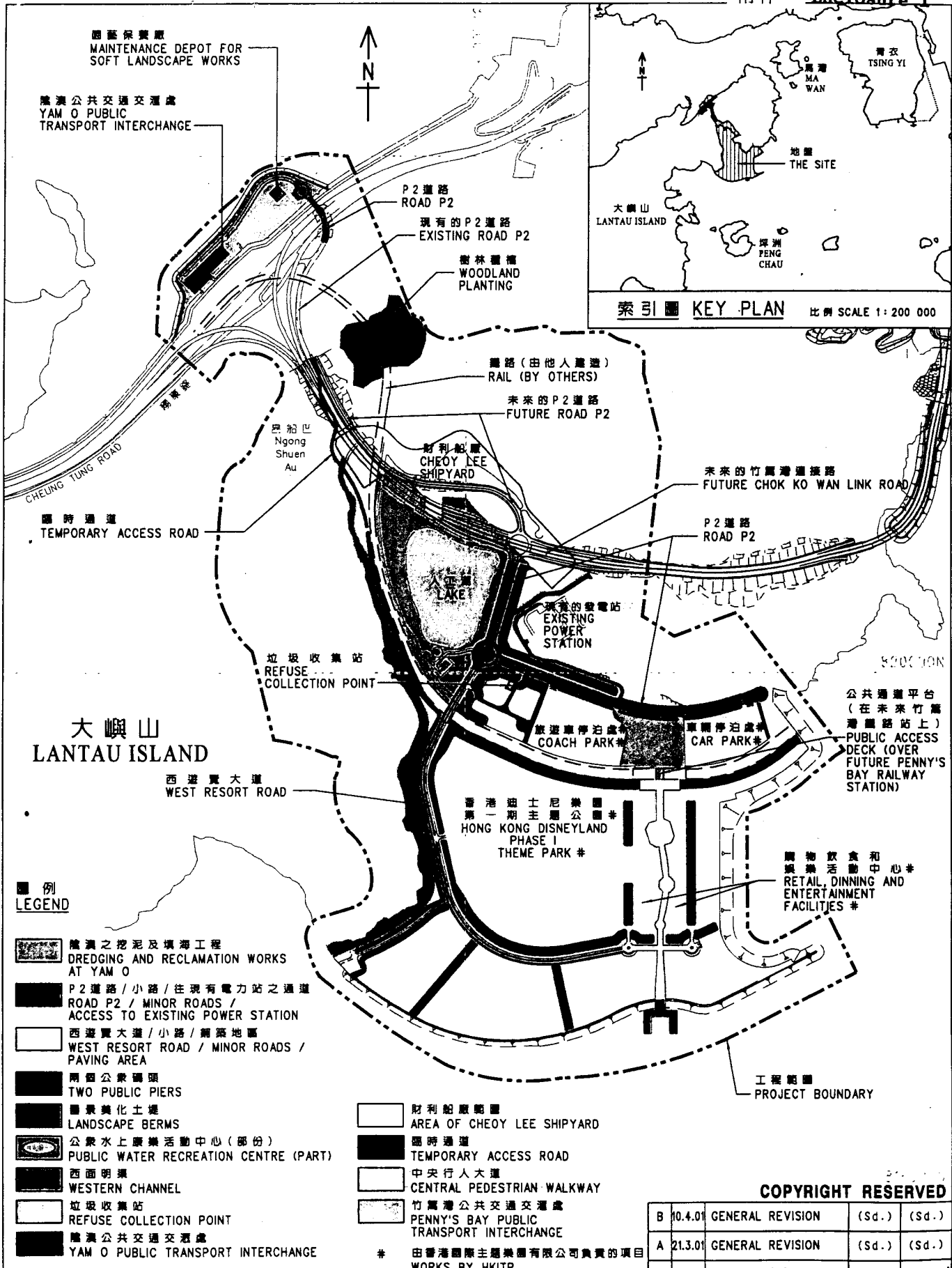
29. On 27 April 2001, Finance Committee approved the upgrading of another part of **660CL** to Category A as **322WF** entitled “Infrastructure for Penny’s Bay Development, Package 1 – Yam O Tuk fresh water service reservoir and associated works” at an estimated cost of \$165 million in MOD prices. We will commence construction works in August 2001.

30. Including this project, we have now sought Finance Committee’s approval for some 93% of the works for the development of HKD Phase 1. Thus far, the works tendered for HKD are within budget.

31. We estimate that the project will create some 1 890 new jobs comprising 350 professional/technical staff and 1 540 labourers totalling 81 700 man-months.

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Tourism Commission  
Economic Services Bureau  
May 2001



圖例 LEGEND

- 疏濬之挖泥及填海工程  
DREDGING AND RECLAMATION WORKS AT YAM O
- P2道路 / 小路 / 往現有電力站之通道  
ROAD P2 / MINOR ROADS / ACCESS TO EXISTING POWER STATION
- 西遊覽大道 / 小路 / 鋪築地區  
WEST RESORT ROAD / MINOR ROADS / PAVING AREA
- 兩個公眾碼頭  
TWO PUBLIC PIERS
- 園景美化土堤  
LANDSCAPE BERMS
- 公眾水上康樂活動中心 (部份)  
PUBLIC WATER RECREATION CENTRE (PART)
- 西面明渠  
WESTERN CHANNEL
- 垃圾收集站  
REFUSE COLLECTION POINT
- 離澳公共交通交匯處  
YAM O PUBLIC TRANSPORT INTERCHANGE

- 財利船廠範圍  
AREA OF CHEOY LEE SHIPYARD
  - 臨時通道  
TEMPORARY ACCESS ROAD
  - 中央行人大道  
CENTRAL PEDESTRIAN WALKWAY
  - 竹篙灣公共交通交匯處  
PENNY'S BAY PUBLIC TRANSPORT INTERCHANGE
- \* 由香港國際主題樂園有限公司負責的項目  
WORKS BY HKITP

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A	21.3.01	GENERAL REVISION	(Sd.)	(Sd.)
no.	date	description	checked	approved

**title**  
660CL (部份)  
竹篙灣發展計劃的基礎設施  
第二組  
660CL (PART)  
INFRASTRUCTURE FOR PENNY'S  
BAY DEVELOPMENT, PACKAGE 2

	name	initial	date
<b>designed</b>			
<b>drawn</b>	K. L. LAU	(Sd.)	15.3.2001
<b>checked</b>	Y. T. WONG	(Sd.)	15.3.2001
<b>approved</b>	W. L. CHAN	(Sd.)	15.3.2001
<b>office</b>	專責事務處 SPECIAL DUTIES OFFICE		

<b>drawing no.</b>	<b>scale</b>
SD 1001-076B	1:20 000
<b>CIVIL ENGINEERING DEPARTMENT HONG KONG</b>	

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**Enclosure 2 to PWSC(2001-02)25**

**660CL – Site formation, construction of associated infrastructures and provision of government, institution and community facilities for an international theme park on Lantau Island**

**Breakdown of estimates for consultants' fees**

<b>Consultants' staff costs</b>		<b>Estimated man-months</b>	<b>Average MPS* salary point</b>	<b>Multiplier factor</b>	<b>Estimated fee (\$ million)</b>
(a) Construction Supervision					
(i) administration of contract and completion certification	Professional	191	38	2.4	26
	Technical	79	14	2.4	4
(ii) resident site staff employed by the consultants	Professional	1 191	38	1.7	116
	Technical	4 497	14	1.7	146
<b>Sub-total</b>					292
(b) Independent Environmental Checker (IEC)	Professional	152	38	2.4	21
	Technical	24	14	2.4	1
<b>Sub-total</b>					22
(c) Environmental Project Office (ENPO)	Professional	138	38	2.4	19
	Technical	21	14	2.4	1
<b>Sub-total</b>					20
<b>Total Consultants' staff costs</b>					334

\* 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 to the average MPS point in the case of resident 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 in relation to contract administration and provision of resident site staff for this project have been included as part of Agreement No. CE 68/99 "Infrastructure for Penny's Bay Development – Engineering Design and construction" and part of Agreement No. CAO J01 "Landscape Works for Penny's Bay Development". These assignments will only be triggered subject to Finance Committee's approval to part upgrade 660CL to Category A.

For information

**Legislative Council Panel on Planning, Lands and Works**

**Infrastructure for Penny's Bay Development, Package 2**

**INTRODUCTION**

When Members considered LC Paper No. CB(1)1123/00-01(03) – Infrastructure for Penny's Bay Development, Package 2 on 7 May 2001, the Administration was requested to:-

- (a) consult fishermen associations and put in place the following measures and mechanism before commencing the proposed project:-
  - (i) to put in place effective measures to prevent fish loss arising from dredging works of the proposed project; and
  - (ii) to work out a mechanism acceptable both to the trade and the Administration in assessing the implications of the proposed project on the marine environment.
- (b) consider contracting different companies to carry out the works items mentioned in para. 3(a) to 3(s) of the draft paper for the Public Works Subcommittee (PWSC), or provide full justifications if considered not feasible to do so, and
- (c) provide the following information:-
  - (i) a table showing a breakdown of works items and their associated costs in connection with the development of Hong Kong Disneyland (HKD) at Penny's Bay;
  - (ii) a copy of the document entrusting Hongkong International Theme Parks Limited (HKITP) to carry out the works items;
  - (iii) a mechanism to enable participation of local companies in the proposed project;
  - (iv) a mechanism for cost control of the proposed project;
  - (v) an account of consultations with Tsuen Wan District Council on the proposed project; and

- (vi) justification for constructing the proposed salt water supply system from Yam O to Penny's Bay.

### **ADMINISTRATION'S RESPONSE**

#### **Minimising of Impact on Ma Wan and Cheung Sha Wan Fish Culture Zones**

2. The Administration is committed to minimising environmental impacts caused by public works. We are concerned about the fish kill incidents which occurred last year at Ma Wan and Cheung Sha Wan Fish Culture Zones (FCZ). We value the comments of LegCo Members expressed at the case conferences and will commission an independent investigation to review the causes of the fish kill incidents. Preparation work is now underway and we expect to commence the investigation in August 2001 after clearing the necessary procedures. We will consult the mariculturists during the investigation.

3. Mariculturists at Ma Wan and Cheung Sha Wan FCZ are eligible for ex-gratia allowance under the relevant policy. Registration exercises have been completed and issuance of ex-gratia allowance according to the opted payment schedule of the mariculturists has also been substantially completed.

4. For the proposed reclamation at Yam O, we will undertake all necessary preventive measures to minimise impact on the Ma Wan FCZ, including the following:-

- (a) adopt a non-dredge reclamation method to minimize the dredging volume. Dredging will be limited mainly to the seawall foundation;
- (b) install silt curtain during the dredging process to reduce the release of sediment to surrounding waters; and
- (c) complete the seawall fronting the area of filling at least to a level above seawater level before commencing filling operations.

5. To ensure the effectiveness of the above preventive measures, we will also implement a comprehensive environmental monitoring and audit programme to monitor water quality at Ma Wan FCZ so that any change in water quality can be detected. We will consult the mariculturists on the water quality monitoring programme, methodology and locations of the monitoring stations before commencement of the construction work. We will maintain dialogue with the mariculturists through regular meetings with representatives of the mariculturists.

### **Entrusting Different Companies to Carry out the Works**

6. We always bear in mind the need to create more opportunities for contractors and consultants in delivering the HKD project. In determining the best contract strategy, we also need to consider other factors including time, cost, interfaces, availability of suitable tenderers, site possession, etc. We have therefore divided the works outside Penny's Bay and Yam O into a number of smaller packages as they have less interface problems and cost implications. These packages include the fresh water service reservoir at Yam O Tuk, water and sewerage works from Siu Ho Wan to Yam O and the salt water supply system.

7. The proposed infrastructure works within Penny's Bay are interrelated, i.e. the commissioning of one element will require support from the other elements to ensure proper functioning of the scheme. These works have to be completed within a very tight schedule to ensure timely opening of HKD. Moreover, the site is to be handed over by the reclamation contractor in phases. There will be many contractors within/in close vicinity working concurrently, e.g. contractors of HKITP, rail operator, utilities and Architectural Services Department, and the contractor of the second infrastructure contract. Experience has proved that too many interfaces for a complex project with tight programmes would easily lead to disputes and contractual claims, in turn causing delayed completions and over-budget. In view of the nature and characteristics of this project, we intended to divide the infrastructure works within Penny's Bay, excluding works to be entrusted to HKITP, into two contracts. The proposed works, excluding the entrustment works, comprises the first of these two contracts.

8. Having considered the views of Members, we have critically reviewed the proposed contract packaging and considered that the piers at Penny's Bay and the public transport interchange at Yam O and its associated works would have less interface and programme constraints. We will therefore take them out from the main contract and implement them under two separate contracts. The number of contracts to be awarded for works covered by the proposed project, excluding the entrustment works, will then be increased from the originally proposed single contract to three contracts. All construction contracts will be awarded through a fair and open approach.

### **Breakdown of Works Items and their Respective Cost**

9. The Government works in the HKD project are divided into a number of packages and their respective costs are as follows:

<b>Packages</b>	<b>Main Scope</b>	<b>Cost in MOD</b>	<b>Cost in Sept. 1999 prices</b>
a. PWP item no. 662CL	Penny's Bay reclamation Stage 1 & design fees for associated infrastructure	\$6,924M (upgraded)	\$6,211M (upgraded)
b. PWP item no. 322WF – Infrastructure Package 1	Yam O Tuk fresh water service reservoir & associated works	\$165M (upgraded)	\$153M (upgraded)
c. Infrastructure Package 2 (This paper)	Infrastructure works at Yam O and Penny's Bay (outside Cheoy Lee Shipyard area), entrustment works, etc.	\$3,917M	\$3,934M
d. Infrastructure Package 3	Infrastructure works within Cheoy Lee Shipyard area, GIC facilities & water and sewerage works from Siu Ho Wan to Yam O	\$ 609M (estimate)	\$608M (estimate)
e. Salt Water System	Salt water system from Tai Ho to Yam O	\$180M (estimate)	\$180M (estimate)
<b><i>Sub-total for works supporting HKD Phase 1</i></b>		<b><i>\$11,795M</i></b>	<b><i>\$11,086M</i></b>
f. Penny's Bay reclamation Stage 2 and associated infrastructure	80 ha reclamation and supporting infrastructure	\$2,235M (estimate)	\$2,202M (estimate)
<b><i>Total cost of Government works for HKD</i></b>		<b><i>\$14,030M</i></b>	<b><i>\$13,288M</i></b>

As compared with Finance Committee's in-principle approved financial commitment of \$13,569M (at Sept. 1999 prices) for the HKD project, the project is within budget.

### **Document Entrusting HKITP to Carry out the Works Items**

10. The entrustment to HKITP includes the design and construction of the Penny's Bay Public Transport Interchange, Central Pedestrian Walkway, and

the landscaping and furnishing works at the Public Access Deck over the Penny's Bay Rail Station. The scope of the entrustment will be well defined in the entrustment documents. An independent checking engineer will be appointed under the entrustment agreement to oversee the design and construction by HKITP to ensure that the quality of work will comply with the Administration's established policy and standards.

11. HKITP is required to let consultancies for design and independent checking on a fair and competitive bidding basis. The tendering for the construction of the entrusted works will comply with the provisions in Article III of the World Trade Organization Agreement on Government Procurement i.e. the contractor for the entrusted works will be selected on a fair competitive bidding basis. Contractors on the List of Approved Contractors for Public Works maintained by Works Bureau (WB) in the appropriate groups will be able to participate in the relevant prequalification and tendering exercises.

12. As the entrustment agreement with HKITP is a commercial contract, it is not appropriate for the document to be released.

### **Enable Participation of Local Companies**

13. The tendering of construction works, whether delivered by the Administration or entrusted to HKITP, will comply with the provisions in Article III of the World Trade Organization Agreement on Government Procurement i.e. the contractor will be selected on a fair competitive bidding basis. Contractors on the List of Approved Contractors for Public Works maintained by WB in the appropriate groups will be able to participate in the relevant prequalification and tendering exercises.

### **Cost Control**

14. WB has been in close liaison with the Hong Kong Institute of Surveyors (HKIS) concerning the engagement of independent Quantity Surveyors (QS) in parallel with the Engineers in major civil engineering projects. The Administration fully appreciates the arguments and value the opinions put forward by HKIS on the subject. Each and every point has been seriously considered.

15. In the process, WB has taken prudent steps to consult all the works departments and to have a consultant to review HKIS's arguments while reviewing the General Conditions of Contract for civil engineering contracts. The subject has also been considered by the Contracts Committee of the Construction Advisory Board. The engineering works departments, the consultant and members of the Committee are not in favour of an independent surveyor in civil engineering projects.

16. Indeed, civil engineering projects and building projects differ significantly in nature. All building projects comprise the input of several professions viz. architect, structural engineer, surveyor and building services engineer. Their responsibilities are well defined and distinct without too much interaction. That explains the long-standing practice that the architect and surveyor are separately appointed to shoulder responsibility for their respective areas of speciality in building projects. On the other hand, civil engineering projects are relatively more complex, due to the need to interact with elements of nature and surroundings, and comprise predominantly civil engineering works. For this reason, it is more cost-effective for an in-house Engineer or a single consultant Engineer to assume overall control and responsibility for efficient project delivery. Within the framework of a single party working on behalf of the Employer, requirements such as efficiency, cost-effectiveness, public accountability, avoidance of conflict of interest, etc. can be achieved by a properly established project team.

17. On this issue, WB has further discussed with representatives of HKIS recently. While reiterating the Administration's stance at that meeting, WB and HKIS agreed to seek views from the Hong Kong Clients' Forum (HKCF). It is noted that in the deliberation on 26 February 2001, members of the HKCF shared the same view with the Administration and did not support engagement of independent Quantity Surveyors in major civil engineering projects. To this end, the Administration has had an extensive consultation and thorough consideration on this subject. Nevertheless, the Administration will continue to review the subject should there be new grounds which have not been considered before.

18. As far as the contracts for this project are concerned, we have planned to employ a dedicated quantity surveying team in the resident site staff team to cope with the large amount of measurement work, rate valuation and claim assessments.

### **Consultation with Tsuen Wan District Council**

19. To ensure that the public can express their concern over any proposed project at an early stage, the Administration normally consults the District Councils when the project framework is established. If there are major changes during the project life, the Administration will consult the District Councils again. In line with this practice, we consulted the Tsuen Wan District Council on the Recommended Outline Development Plan for the Theme Park and Northshore Lantau Development and the findings of the Environmental Impact Assessments in March 2000. As there are no major changes to the project since March 2000, no additional consultations have been made. However, we consulted the Tsuen Wan District Council again on the detailed roadworks and sewerage works proposals in May and September 2000 respectively.

**Justification for Salt Water Supply from Yam O to Penny's Bay**

20. For strategic development of North Lantau, Water Supplies Department planned to implement a salt water supply system for Tai Ho, Siu Ho Wan and Yam O, including Penny's Bay. Salt water for Penny's Bay will be supplied from a central pumping station at Tai Ho via a service reservoir at Yam O Tuk which maintains the rate and pressure of the supply. The salt water system from Yam O to Penny's Bay is part of the above proposed system.

Civil Engineering Department  
May 2001