ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Civil Engineering – Land development

465CL – Kai Tak development – Kai Tak approach channel and Kwun Tong typhoon shelter improvement works

702CL – Kai Tak development – Remaining infrastructure works for developments at the former runway

Members are invited to recommend to Finance Committee –

- (a) the upgrading of part of **465CL**, entitled "Kai Tak development detailed design and site investigation for Kai Tak approach channel and Kwun Tong typhoon shelter improvement works", to Category A at an estimated cost of \$50.0 million in money-of-the-day prices;
- (b) the upgrading of part of **702CL**, entitled "Kai Tak development detailed design and site investigation for remaining infrastructure works for developments at the former runway", to Category A at an estimated cost of \$32.0 million in money-of-the-day prices; and
- (c) the retention of the remainder of **465CL** and **702CL** in Category B.

/PROBLEM

PROBLEM

We need to carry out detailed design of the improvement works to Kai Tak approach channel (KTAC) and Kwun Tong typhoon shelter (KTTS). We also need to carry out detailed design of the remaining infrastructure works for the planned developments at the former runway and south apron.

PROPOSAL

The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade part of 465CL and 702CL to Category A at an estimated cost of \$50.0 million and \$32.0 million respectively in money-of-the-day (MOD) prices for investigations and environmental mitigation trial and monitoring, engagement of consultants to undertake detailed design and tender documentation for the improvement works to KTAC and KTTS and the remaining infrastructure works at the former runway and south apron.

PROJECT SCOPE AND NATURE

- 3. The scope of **465CL** comprises –
 - treatment¹ of the contaminated sediments at KTAC and KTTS; (a)
 - (b) forming of a 600-metre opening at the former runway and construction of a piled deck for support of Metro Park on top of the opening;
 - improvement works to the embankments of the associated (c) waterways;
 - (d) demolition of existing dolphin connecting to the former runway; and
 - implementation of necessary environmental mitigation measures, (e) monitoring and auditing work.

/4.

The treatment includes bioremediation and dredging. Bioremediation involves injection of oxidants into the treatment area to provide the intrinsic bacteria with oxygen, thereby enhancing the transformation of odorous sulphides into odourless sulphates.

- 4. The part of **465CL** we propose to upgrade to Category A comprises site investigation and environmental mitigation trial and monitoring, and engagement of consultants to undertake detailed design and tender documentation for the works described in paragraphs 3(a) to (e) above.
- 5. The scope of **702CL** comprises
 - (a) construction of approximately 1 kilometre of a dual 2-lane district distributor;
 - (b) construction of three footbridges;
 - (c) construction of a piled deck for support of the district distributor on top of the 600-metre opening;
 - (d) construction of local roads, footbridge and subway extensions, junction improvement, drainage, sewerage, water mains and landscaping works at the former runway and south apron, and other associated works; and
 - (e) implementation of necessary environmental mitigation measures, monitoring and auditing work.
- 6. The part of **702CL** we propose to upgrade to Category A comprises site investigation and engagement of consultants to undertake detailed design and tender documentation for the works described in paragraphs 5(a) to (e) above.

A plan showing the proposed works of **465CL** and **702CL** is at Enclosure 1.

7. For **465CL**, we plan to commence the site investigation and detailed design of the proposed works in July 2009 for completion in January 2011, with a view to commencing the construction works in April 2011. For **702CL**, we plan to commence the site investigation and detailed design of the proposed works in July 2009 for completion in phases by October 2012, with a view to commencing the construction works in phases from January 2012 onwards.

/JUSTIFICATION

JUSTIFICATION

- 8. KTAC is receiving flows from a large old urban catchment area of about 1 800 hectares in East Kowloon. In the past few decades, expedient connections in San Po Kong, Diamond Hill and Wong Tai Sin were attributable to the water pollution and the emission of obnoxious odour in KTAC and KTTS. Pollutants contaminated with heavy metals and other toxins have also been found scattering over the seabed at KTAC and KTTS over the years². For environmental reason and to facilitate enjoyment of the waterfront by the public, there is a need to treat the contaminated sediments at the seabed of KTAC and KTTS to remove the odour problem in the vicinity. Under 465CL, we will treat the sediments using bio-remediation method and improve water circulation and hence water quality in the area through creation of a 600-metre opening at the former runway. In conjunction with the formation of the 600-metre opening at the former runway, we will deck the opening to provide land to accommodate the Metro Park above. We have included the works in the second development package of Kai Tak Development (KTD) for completion by 2016.
- 9. We also need to provide infrastructure under **702CL** in accordance with the planned programme to cater for the projects included in the third development package of KTD targeted for completion by 2021. Major projects include Metro Park, commercial and residential developments. Timely provision of the infrastructure will help transform the former runway into a vibrant tourism and leisure hub.
- 10. To meet the above programmes, we propose to proceed with the detailed design, site investigations and tender documentation of the proposed works. Due to insufficient in-house resources, we propose to engage consultants to carry out the work.

FINANCIAL IMPLICATIONS

11. We estimate the cost of the site investigations, environmental mitigation trial and monitoring, and consultancies proposed to be part-upgraded under **465CL** and **702CL** to be \$50.0 million and \$32.0 million respectively in MOD prices (see paragraph 12 below), made up as follows –

/(a)

_

The situation has been improved in recent years. This is the result of the enactment of the Water Pollution Control Ordinance (1980) and the Waste Disposal Ordinance (1980), as well as implementation of the East Kowloon Sewerage Master Plan. However, treatment of the existing contaminated sediments is still required.

\$ million

(a)	Site investigations	465CL 7.8	702CL 3.9	
(u)	Site investigations	7.0	3.7	
(b)	Environmental mitigation trial and monitoring	4.1	-	
(c)	Consultants' fees for	31.6	23.3	
	(i) supervision of site investigations	1.0	0.4	
	(ii) supervision of environmental mitigation trial and monitoring	0.5	-	
	(iii) detailed design	25.4	19.1	
	(iv) tender documentation and assessment	4.7	3.8	
(d)	Contingencies	3.7	2.7	
	Sub-total	47.2	29.9	(in September 2008
(e)	Provision for price adjustment	2.8	2.1	prices)
	Total	50.0	32.0	(in MOD prices)

A breakdown of the estimate for consultants' fees by man-months is at Enclosure 2.

	12.	Subject to approval,	we will phase the ex	penditure as follows –
--	-----	----------------------	----------------------	------------------------

\$ million (Sept 2008)		Price adjustment factor	\$ million (MOD)	
465CL	702CL		465CL	702CL
10.7	5.1	1.03500	11.1	5.3
26.3	8.6	1.05570	27.8	9.1
4.4	8.9	1.07681	4.7	9.6
5.8	7.3	1.09835	6.4	8.0
47.2	29.9		50.0	32.0
	(Sept 2) 465CL 10.7 26.3 4.4 5.8	(Sept 2008) 465CL 702CL 10.7 5.1 26.3 8.6 4.4 8.9 5.8 7.3	(Sept 2008) adjustment factor 465CL 702CL 10.7 5.1 1.03500 26.3 8.6 1.05570 4.4 8.9 1.07681 5.8 7.3 1.09835	(Sept 2008) adjustment factor (MC) 465CL 702CL 465CL 10.7 5.1 1.03500 11.1 26.3 8.6 1.05570 27.8 4.4 8.9 1.07681 4.7 5.8 7.3 1.09835 6.4

- 13. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2009 to 2013. Subject to approval, we will award the proposed consultancies on a lump sum basis with provision for price adjustments in the consultancy agreements as the duration of the consultancies will exceed 12 months. We will tender the site investigation works under a standard re-measurement contract because the quantity of works involved will vary depending on actual ground conditions. The contracts for site investigation works will provide for price adjustments.
- 14. The proposed site investigation works and consultancies will not give rise to any recurrent consequence.

PUBLIC CONSULTATION

15. The planning of KTD has adopted an extensive public participatory approach³. After rounds of consultations during the public

/participation

The stage 1 public participation to engage the public in determining vision and key issues on Kai Tak was completed in November 2004. The stage 2 public participation to gauge the public views on the outline concept plans was completed in January 2006. The stage 3 public participation on the preliminary outline development plan was completed in August 2006.

participation programme and representation hearing under the Town Planning Ordinance (Cap. 131), a broad community consensus has been obtained on the KTD. There are also requests for early implementation of KTD.

- 16. We consulted the Wong Tai Sin District Council and the Kwun Tong District Council on 6 January 2009 and the Kowloon City District Council on 22 January 2009. All three District Councils were generally supportive to the proposed works.
- Regarding the improvement works to KTAC under **465CL**, some members of the Kowloon City District Council expressed concerns on the effectiveness of the proposed bioremediation and the 600-metre opening at the runway. In this respect, we arranged a site visit with the District Council members on 17 March 2009 and attended its Housing and Infrastructure Committee (HIC) meeting on 23 April 2009 to explain why the complementarity of the proposed improvement works is necessary for solving the odour problem in the long run. Our commitments to further engagement with the Kowloon City District Council in the design stage of the proposed 600-metre opening and parallel efforts to deal with the odour problem in the neighbouring To Kwa Wan Typhoon Shelter have helped allay their concerns. On this basis, HIC had no further comment on our proposal to proceed to the design stage of the project.
- 18. Regarding the proposed vehicular cum pedestrian bridge linking the former runway tip and Kwun Tong, the Kwun Tong District Council passed motions at its meeting on 6 January 2009 and 3 March 2009 urging the provision of the bridge link and monorail. We are investigating the practicality of the bridge link to avoid possible legal challenge under the Protection of the Habour Ordinance (Cap 531). Parallel action is also being undertaken to investigate alternative routes of a proposed monorail for connection to the Kwun Tong waterfront without the need of the bridge link.
- 19. We consulted the Legislative Council Panel on Development on 31 March 2009 in respect of the proposed consultancies and site investigation works. In response to some Members' concern about the odour problem at

KTAC, we explained that a comprehensive study covering pilot field trials and laboratory analyses was conducted to ensure the effectiveness of the proposed three-pronged approach (i.e. improvement of the drainage and sewerage systems in the hinterland of KTD to intercept polluted discharges at source, in-situ bioremediation treatment on sediments to oxidize the smelly sulphides, and creation of a 600-m opening at the former runway to improve water circulation and hence water quality). We also explained that the three-pronged approach had received statutory approval under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). Nevertheless, we undertook to conduct further consultations with the locals during the design stage and ensure that the proposed measures would not affect the water quality in To Kwa Wan Typhoon Shelter. We circulated a supplementary information paper on 22 April 2009 providing further information to Members on the subject.

ENVIRONMENTAL IMPLICATIONS

- 20. The proposed consultancies and site investigation works will not have any environmental implications. We have completed an EIA report for the whole KTD, which was approved by the Environmental Protection Department on 4 March 2009. We will ensure that the recommendations in the approved EIA report will be carried out throughout the implementation of the project.
- 21. The proposed consultancies and site investigation works will only generate very little construction waste. We will require the consultants to fully consider measures to minimize the generation of construction waste and to reuse/recycle construction waste as much as possible in the future implementation of the construction projects.

HERITAGE IMPLICATIONS

22. The proposed consultancies and site investigation works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

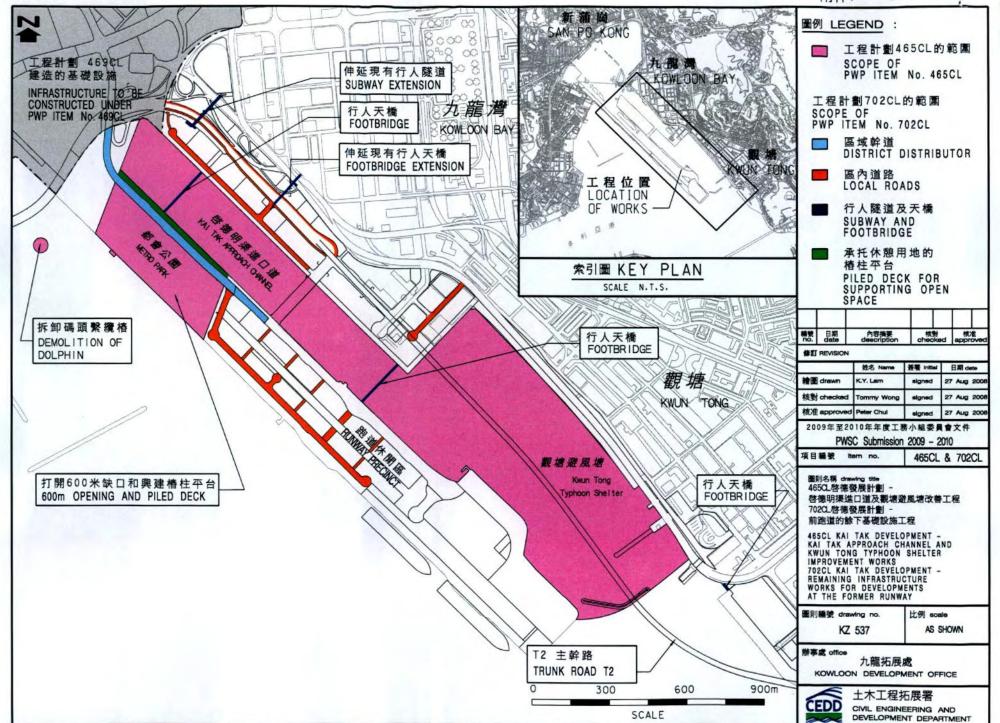
23. The proposed consultancies and site investigation works do not require any land acquisition.

BACKGROUND INFORMATION

- 24. We included **465CL** and **702CL** in Category B in September 1996 and September 2008 respectively.
- 25. In November 2001, we upgraded part of **465CL** to Category A as **693CL** for site investigation and engagement of consultants to undertake the detailed design for reclamation of KTAC. In the light of the Court of Final Appeal's ruling on harbour reclamation under the Protection of the Harbour Ordinance, the consultancy had been suspended since December 2003 and was terminated in July 2006.
- During the period 2004 to 2006, we carried out extensive public engagement for re-planning of KTD. After three rounds of public participation, we arrived at a development scheme which was subsequently incorporated into the statutory Kai Tak Outline Zoning Plan (Plan No. S/K22/2) which was approved by the Chief Executive in Council in November 2007. The development scheme was based on a no-reclamation scenario.
- 27. At the Public Works Subcommittee (PWSC) meeting on 31 October 2001, some Members suggested and the Administration agreed to include information on the scope, approved project estimates and progress of all KTD (formerly known as South East Kowloon development) Public Works Programme items in future PWSC submissions relating to the project. The information is at Enclosure 3.
- 28. The proposed consultancies and site investigation works will not involve any tree removal or planting proposals.

We estimate that the proposed consultancies and site investigation works under **465CL** and **702CL** will create about 47 (6 for labourers and another 41 for professional/technical staff) and 18 (3 for labourers and another 15 for professional/technical staff) jobs providing a total employment of 830 and 540 man-months respectively.

Development Bureau April 2009



- 465CL Kai Tak development Kai Tak approach channel and Kwun Tong typhoon shelter improvement works
- 702CL Kai Tak development remaining infrastructure works for developments at the former runway

Breakdown of the estimate for consultants' fees (in September 2008 prices)

Consultants' staff costs (Note 2)		Estimated man-months		Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$ million)	
		465CL	702CL			465CL	702CL
(a) Supervision of site investigation	Professional Technical	2.3 18	1.2	38 14	2.0 2.0	0.3 0.7	0.1 0.3
(b) Supervision of environmental mitigation trial and monitoring	Professional Technical	1.1 10	-	38 14	2.0 2.0	0.1 0.4	-
(c) Detailed design and tendering process	Professional Technical	171 238	155 104	38 14	2.0 2.0	20.7 9.4	18.8 4.1
					Total	31.6	23.3

^{*} MPS = Master Pay Scale

Notes

- 1. A multiplier of 2.0 is applied to the average MPS point to estimate the full staff cost including the consultants' overheads and profit for staff employed in the consultants' offices. MPS points 38 and 14 are used as the average MPS salary points for professionals and technical staff respectively. (As at 1 April 2008, MPS pt. 38 = \$60,535 per month and MPS pt. 14 = \$19,835 per month)
- 2. We will know the actual man-months and fees only when we have selected the consultants through the usual competitive fee bid system.

Kai Tak Development List of PWP items in Category A

PWP Item No. 440CL

Project title: South East Kowloon development – comprehensive

feasibility study

Date of upgrading

to Category A: April 1995

Approved project

estimate: \$220.0 million

Project scope: The project comprises a comprehensive feasibility study for

the whole South East Kowloon area, as well as associated

laboratory testing and site investigation works.

Brief account of progress:

(a) The feasibility study was completed in December

2003.

(b) The project account has been finalised at the sum of

\$185.2 million.

* * *

PWP Item No. 494CL (part upgraded from 469CL)

Project title: South East Kowloon development at Kai Tak Airport –

decontamination and site preparation

Date of upgrading

to Category A: February 1998

Approved project

estimate: \$316.9 million

Project scope:

- (a) ground decontamination at the north apron of Kai Tak Airport (NAKTA);
- (b) demolition of existing buildings and structures in the northern part of NAKTA; and
- (c) breaking up of the existing apron slab and land formation at NAKTA for housing development.

Brief account of progress:

- (a) The civil engineering contract covering the above works was completed in April 2002.
- (b) Post-decontamination monitoring works were completed in December 2003.
- (c) The project account has been finalised at the sum of \$281.8 million.

* * *

PWP Item No.

694CL (part upgraded from **469CL**)

Project title:

South East Kowloon development at Kai Tak Airport – consultants' fees and site investigation

Date of upgrading to Category A:

November 2001

Approved project estimate:

\$115.9 million

Project scope:

Site investigation works and detailed design for –

- (a) about 6 kilometres box culverts;
- (b) new roads including flyovers and pedestrian streets, and upgrading of existing roads and associated drainage, sewerage and watermains;
- (c) five sewage pumping stations and rising mains to convey sewage to the existing To Kwa Wan sewage treatment plant;
- (d) drainage maintenance depots along with provision of plant and equipment for servicing the drainage culverts in NAKTA;

- (e) open space development and landscaping works;
- (f) demolition of remaining ex-airport facilities, including the passenger terminal building and Kai Tak car-parking building and decontamination of land underneath the buildings; and
- (g) provision of necessary environmental mitigation measures and implementation of an environmental monitoring and audit (EM&A) programme.

Brief account of progress:

- (a) Consultancy started in January 2002.
- (b) Detailed design for demolition of the passenger terminal building and associated structures remaining in NAKTA has been completed.
- (c) Detailed design of the stage 1 infrastructure works at the north apron has been completed.
- (d) Detailed design of the remaining infrastructure works at the north apron is in progress.

* * *

PWP Item No. **693CL** (part upgraded from **465CL**)

Project title: South East Kowloon development – consultants' fees and

site investigation for Kai Tak Approach Channel

reclamation

Date of upgrading to

Category A: November 2001

Approved project

estimate: \$63.8 million

Project scope: Site investigation works and detailed design for –

(a) treatment of the contaminated sediments (including pilot tests and post-treatment monitoring) in Kai Tak Approach Channel (KTAC);

(b) reclamation works in KTAC;

- (c) new drainage systems (including widening and extension of Kai Tak Nullah and Jordan Valley box culvert, advance work for future road tunnels underneath the box culverts) and improvements to existing drainage systems necessitated by the proposed reclamation in KTAC;
- (d) demolition of the existing airport taxiway bridge across KTAC;
- (e) provision of necessary environmental mitigation measures and implementation of an EM&A programme; and
- (f) field surveys and environmental studies for different scenarios of Kai Tak development.

Brief account of progress:

- (a) Consultancy started in January 2002.
- (b) In the light of the Court of Final Appeal's ruling on harbour reclamation under the Protection of the Harbour Ordinance, the consultancy had been suspended since December 2003 and was terminated in July 2006.
- (c) The project account has been finalised at the sum of \$50.2 million.

* * *

PWP Item No. **699CL** (part upgraded from **482CL**)

Project title: South East Kowloon development – consultants' fees and

site investigation for Kowloon Bay reclamation and

engineering works

Date of upgrading to Category A:

July 2002

Approved project

estimate: \$105.7 million

Project scope: Site investigation works and detailed design for –

- (a) treatment of contaminated sediments (including posttreatment monitoring) at the seabed of Kowloon Bay;
- (b) reclamation for about 61 hectares of land in Kowloon Bay;
- (c) construction of a new seawall, breakwater, and marine facilities including public landing steps;
- (d) demolition of existing breakwaters and marine facilities including Kowloon City vehicular ferry pier, passenger ferry pier and public pier;
- (e) construction of new drainage culverts and improvements to existing hinterland drainage systems necessitated by the proposed reclamation in Kowloon Bay;
- (f) upgrading of existing roads and construction of new roads, a road tunnel, pedestrian streets, footbridges and pedestrian subways with associated drainage, sewerage and water works;
- (g) construction of public transport facilities;
- (h) construction of sewage holding facilities adjacent to the existing To Kwa Wan sewage treatment works and sewage pumping stations;
- (i) relocation of the existing Eastern Quarantine and Immigration Anchorage and mooring buoys within Kowloon Bay;
- (j) provision of landscaping works at the proposed reclamation area;
- (k) provision of environmental protection measures; and
- (l) implementation of an EM&A programme.

Brief account of progress:

- (a) Consultancy started in December 2002.
- (b) In the light of the Court of Final Appeal's ruling on harbour reclamation under the Protection of the Harbour Ordinance, the consultancy had been suspended since December 2003 and was terminated in July 2006.
- (c) The project account has been finalised at the sum of \$6.1 million.

* * *

PWP Item No. **708CL** (part upgraded from **469CL**)

Project title: South East Kowloon development – site preparation and drainage works at north apron area of Kai Tak Airport

Date of upgrading to Category A:

February 2004

Approved project estimate:

\$131.6 million

Project scope:

- (a) construction of about 600 metres of a twin-cell box culvert and decommissioning of an existing culvert;
- (b) demolition of the passenger terminal building, the Kai Tak car-parking building and associated structures, along with related land decontamination; and
- (c) implementation of an EM&A programme for the works mentioned in items (a) to (b) above.

Brief account of progress:

- (a) Works contract commenced in April 2004.
- (b) The works were substantially completed in September 2006.

* * *

PWP Item No. **719CL**

Project title: Kai Tak development - engineering review

Date of upgrading to Category A:

December 2006

Approved project

estimate:

\$87.5 million

Project scope:

- (a) a study to confirm the detailed engineering feasibility of the revised Preliminary Outline Development Plan of Kai Tak development;
- (b) preliminary preparatory work for the early development of the cruise terminal in Kai Tak; and
- (c) associated site investigation and supervision.

Brief account of progress:

- (a) Consultancy commenced in January 2007.
- (b) Engineering review is in progress.

* * *

PWP Item No. 724CL (part upgraded from 711CL)

Project title: Kai Tak development – investigation and detailed design

for advance infrastructure works for developments at the

southern part of the former runway

Date of upgrading

to Category A: December 2006

Approved project

estimate: \$38.0 million

Project scope: (a) detailed design of the works described below including the associated Schedule 2 environmental

impact assessments:

- construction of approximately 2 kilometres of a dual 2-lane district distributor including

associated pedestrian deck;

provision of a sewage pumping station and rising mains;

- improvements to related existing bridge, roads and junctions;
- construction of associated local roads, transport facilities, drainage, sewerage, watermains and landscaping works;
- relocation and reprovisioning of existing facilities including the Marine Vessel Traffic Services (MVTS) radar and fireboat berthing facilities; and
- an environmental monitoring and audit work for works mentioned above,

all for serving the proposed developments at the southern part of the former runway in Kai Tak.

- (b) associated site investigation and supervision; and
- (c) preparation of tender documents and assessment of tenders.

Brief account of progress:

- (a) Consultancy commenced in January 2007.
- (b) Detailed design of the decommissioning and decontamination works at the south apron and installation of supplementary radar at North Point Government Offices (NPGO) has been completed.
- (c) Detailed design of the stage 1 advance infrastructure works has been completed.
- (d) Detailed design of the remaining infrastructure works is in progress.

* * *

PWP Item No. 734CL (part upgraded from 711CL)

Project title: Kai Tak development – decommissioning and decontamination works at the south apron of the former Kai Tak Airport and installation of supplementary radar at North Point Government Offices

Date of upgrading to Category A: February 2008

Approved project estimate:

\$120.1 million

Project scope:

- (a) decommissioning and decontamination of about 12,600 square metres of land at the south apron of the former Kai Tak Airport;
- (b) procurement and installation of a supplementary radar and associated signal processing and relaying equipment on the rooftop of NPGO, including integration into the existing MVTS system of Marine Department;
- (c) construction of a radar support and an equipment room on the rooftop of NPGO, provision of building services and other associated works; and
- (d) implementation of necessary environmental mitigation measures, monitoring and auditing work.

Brief account of progress:

- (a) Works contract commenced in May 2008.
- (b) Construction works are in progress for completion in early 2010.

* * *