ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT Civil Engineering – Land development 469CL – Kai Tak development – Infrastructure at north apron area of Kai Tak Airport

Members are invited to recommend to Finance Committee –

- (a) the upgrading of part of **469CL**, entitled "Kai Tak development stage 1 infrastructure works at north apron area of Kai Tak Airport" to Category A at an estimated cost of \$566.5 million in money-of-the-day prices; and
- (b) the retention of the remainder of **469CL** in Category B.

PROBLEM

There is no infrastructure to serve the early developments at the north apron of the former Kai Tak Airport.

/PROPOSAL

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade part of **469CL** to Category A at an estimated cost of \$566.5 million in money-of-the-day (MOD) prices for construction of the stage 1 infrastructure works to serve the early developments at the north apron.

PROJECT SCOPE AND NATURE

- 3. The scope of **469CL** comprises the construction of new infrastructure such as roadworks, public transport interchanges, grade-separated pedestrian crossing facilities, drainage, sewerage, water mains and landscaping works. It also includes improvements to existing roadworks.
- 4. The part of **469CL** we propose to upgrade to Category A comprises-
 - (a) construction of about 2.6 kilometres of new roads, realignment of Concorde Road, extension and widening of Kai Wah Street, temporary and permanent closure of existing roads within the north apron, and associated drainage, sewerage and water mains;
 - (b) construction of two footbridges (FB1 and FB4) of total length of about 260 metres (m) and improvement works to three existing subways (SW1, SW3 and SW5) across Prince Edward Road East;
 - (c) construction of two drainage box culverts (3.0 m by 2.8 m and 2.5 m by 2.5 m respectively) of total length of about 600 m;
 - (d) associated landscaping works; and
 - (e) provision of necessary environmental mitigation measures and implementation of an environmental monitoring and audit (EM&A) programme for the works mentioned in subparagraphs (a) to (d) above.

A plan showing the proposed works is at Enclosure 1.

5. We plan to commence construction of the proposed works in July 2009 for completion by December 2013.

JUSTIFICATION

- 6. The vast flat land at the north apron is largely planned as the new Kai Tak city centre with a mixed use of commercial, office and residential developments. The public housing development, schools and Kai Tak Government Offices (KTGO) are the early developments targeted for completion by 2013 under the first development package of Kai Tak Development (KTD). The public housing development comprising about 13 000 flats will house some 33 600 population. The KTGO with a gross floor area of some 50 000 square metre will provide Government services to both the existing population in the adjoining areas such as San Po Kong and Kowloon City, and the new population in KTD at an early stage.
- 7. The proposed works will enhance vehicular and pedestrian connections between the north apron and the surrounding built-up areas, thereby providing convenient access to and from the early developments. There is therefore a need to complete the proposed works timely before population intake of the public housing development and completion of KTGO.
- 8. Due to insufficient in-house resources, we propose to engage consultants to supervise construction of the proposed works.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the proposed works to be \$566.5 million in MOD prices (see paragraph 10 below), made up as follows-

		\$ million
(a)	Roadworks and associated landscaping works	146.7
(b)	Footbridges	109.8
(c)	Drainage, sewerage and water mains	106.4

		\$ million	
(d)	Box culverts	34.4	
(e)	Subway improvement works	27.0	
(f)	Environmental mitigation measures and EM&A programme	8.5	
(g)	Consultants' fees for contract administration	3.7	
(h)	Resident site staff costs	38.6	
(i)	Contingencies	47.5	
	-		_
	Sub-total	522.6	(in September 2008 prices)
(j)	Provision for price adjustment	43.9	_
	Total	566.5	(in MOD prices)

A breakdown of the estimate for the consultants' fees and resident site staff costs by man-months is at Enclosure 2.

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

Year	\$ million (Sept 2008)	Price adjustment factor	\$ million (MOD)
2009 –10	51.5	1.03500	53.3
2010 – 11	105.2	1.05570	111.1
2011 – 12	130.7	1.07681	140.7
2012 – 13	130.7	1.09835	143.6

Year	\$ million (Sept 2008)	Price adjustment factor	\$ million (MOD)	
2013 – 14	78.4	1.12032	87.8	
2014 – 15	26.1	1.15113	30.0	
	522.6		566.5	

- 11. We have derived the MOD estimate 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 2015. We will tender the works under a standard re-measurement contract because the quantities of the infrastructure works will vary depending on actual ground conditions and location of underground utilities. The contract will provide for price adjustments.
- 12. We estimate the annual recurrent expenditure arising from the proposed works to be about \$5.9 million.

PUBLIC CONSULTATION

- 13. The planning of KTD has adopted an extensive public participatory approach ¹. After rounds of consultations during the public participation programme and representation hearing under the Town Planning Ordinance (Cap. 131), a broad community consensus has been obtained on KTD. There are also requests for early implementation of KTD.
- 14. We consulted the Housing and Infrastructure Committee of Kowloon City District Council, Wong Tai Sin District Council and the Housing Committee of Kwun Tong District Council on 6, 11 and 27 March 2008 respectively. They are generally supportive to the early implementation of the proposed works.

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preliminary outline development plan was completed in August 2006.

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

- 15. We gazetted the proposed roadworks under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) on 29 August 2008 and received one objection. We approached the objector, who subsequently indicated his intention to withdraw the objection on the conditions that the Harbour-front Enhancement Committee (HEC) should be continuously involved in the detailed planning of KTD and further study should be conducted to reduce the land occupied by existing and new roads. We clarified that the proposed roadworks were formulated based on the approved Kai Tak Outline Zoning Plan which had undergone extensive public participation in collaboration with the HEC. The objector did not withdraw his objection in the end. The Chief Executive in Council subsequently overruled the objection on 31 March 2009 and the roadworks were authorized on 17 April 2009.
- 16. We gazetted the proposed sewerage works under the Water Pollution Control (Sewerage) Regulation (Cap. 358) on 29 August 2008. No objection was received. The sewerage works were authorized on 17 April 2009.
- 17. On 20 January 2009, we briefed the Legislative Council Panel on Development regarding the implementation plan for KTD and informed Members our plan to seek funding approval of the proposed works in the second quarter of 2009. We subsequently consulted the Panel on the proposed works on 31 March 2009 and Members raised no objection to the proposed works.

ENVIRONMENTAL IMPLICATIONS

18. The proposed works are not Designated Projects and do not require environmental permits under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). Nevertheless, they form part of KTD which is a Designated Project requiring an EIA report under Schedule 3 of the EIA Ordinance. The KTD EIA report approved by the Environmental Protection Department on 4 March 2009 concluded that the project would not cause long-term adverse environmental impact with implementation of the recommended mitigation measures.

- 19. For short-term impacts caused by the works during construction, we will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures under the works contract. These measures include frequent watering of the site and provision of wheel-washing facilities to reduce emission of fugitive dust, the use of movable noise barriers/enclosures and silenced plant to reduce noise generation, temporary drains to dispose of site run-off as well as other procedures recommended in the KTD EIA report. We will also implement EM&A programme throughout the construction period of the project.
- 20. We have included \$8.5 million (in September 2008 prices) in the project estimate for implementing the environmental mitigation measures and EM&A programme.
- 21. We have considered the alignment, design level and construction method of the proposed works in the planning and design stages to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil and rock fill) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste to public fill reception facilities². We will encourage the contractor to maximize the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimize the generation of construction waste.
- 22. 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.

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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.

23. We estimate that the project will generate in total about 66 471 tonnes of construction waste. Of these, we will reuse about 48 512 tonnes (73.0%) of inert construction waste on site and 16 419 tonnes (24.7%) of inert construction waste in other construction sites. In addition, we will dispose of 1 540 tonnes (2.3%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at landfill sites is estimated to be \$192,500 for this project (based on a unit cost of \$125/tonne³ for disposal at landfills).

TRAFFIC IMPLICATIONS

24. We have completed a traffic impact assessment (TIA) for the proposed works. The TIA has concluded that the proposed works would not cause any significant traffic impact. During construction, we will maintain smooth traffic flow through implementing temporary traffic management measures and will display notice boards on site to explain the reasons of temporary traffic arrangements and indicate the expected completion dates of the concerned sections of works. In addition, we will set up telephone hotlines for public enquires or complaints.

HERITAGE IMPLICATIONS

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

LAND ACQUISITION

26. The proposed works do not require any land acquisition.

BACKGROUND INFORMATION

We included **469CL** in Category B in March 1996.

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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/m³), nor the cost to provide new landfills, (which is likely to be more expensive) when the existing ones are filled.

- 28. In February 1998, the Finance Committee (FC) approved the upgrading of part of 469CL to Category A as 494CL and to keep the remainder in Category B. Works upgraded to Category A at an estimated cost of \$316.9 million in MOD prices included ground decontamination, demolition of existing buildings and structures in northern part of the north apron, breaking up of existing apron slab and formation of land for housing development. We started works in October 1998 and completed them in April 2002.
- 29. In November 2001, FC approved the upgrading of another part of **469CL** to Category A as **694CL** at an estimated cost of \$115.9 million in MOD prices for site investigation and engagement of consultants to carry out detailed design of infrastructure at the north apron. We have completed the detailed design and tender documents of the proposed works mentioned in paragraph 4 above. The detailed design of the remaining infrastructure works⁴ at the north apron is in progress.
- 30. In February 2004, FC approved the upgrading of another part of **469CL** to Category A as **708CL**. Works upgraded to Category A at an estimated cost of \$131.6 million in MOD prices included demolition of the passenger terminal building and associated structures at the north apron and construction of associated drainage works. We started works in April 2004 and completed them in September 2006.
- 31. At the Public Works Subcommittee (PWSC) meeting 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. information is at Enclosure 3.

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The remainder of 469CL will be implemented to tie in with the development programme of the remaining developments at the north apron, i.e. the Government, Institution or Community facilities, residential and commercial developments.

- 32. Of the 181 trees within the project boundary, 53 trees will be preserved. The proposed works will involve the removal of 128 trees including 44 trees to be felled and 84 trees to be replanted within the project site. All the trees to be removed are not important trees⁵. We will incorporate planting proposals as part of the project, including estimated quantities of 620 trees, 50 000 shrubs and 1 000 square metres of grassed area.
- 33. We estimate that the proposed works will create about 306 jobs (243 for labourers and another 63 for professional/technical staff) providing a total employment of 9 600 man-months.

Development Bureau April 2009

⁵ "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 –

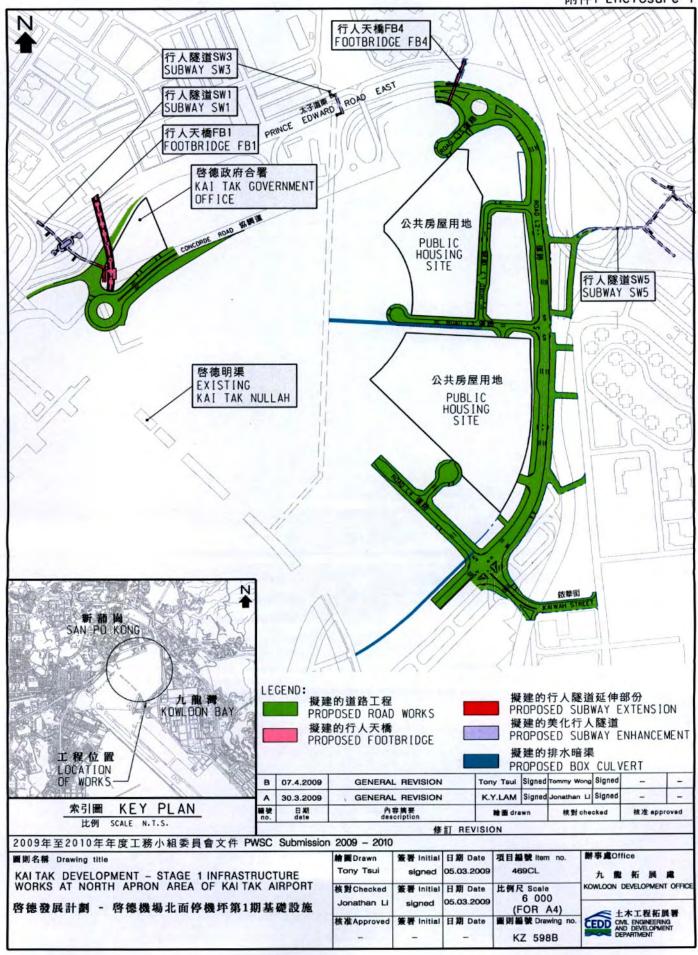
⁽a) trees of 100 years old or above;

⁽b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument and trees in memory of important persons or events;

⁽c) trees of precious or rare species;

⁽d) trees of outstanding form (taking account of overall tree size, 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 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 metres.



469CL – Kai Tak development – infrastructure at north apron area of Kai Tak Airport

Breakdown of the estimate for consultants' fees and resident site staff costs (in September 2008 prices)

		Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' fees	Professional	-	-	-	2.8
for contract administration (Note 2)	Technical	-	-	-	0.9
(b) Resident site staff	Professional	183	38	1.6	17.7
COStS (Note 3)	Technical	659	14	1.6	20.9
				Total	42.3

^{*} MPS = Master Pay Scale

Note

- 1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of resident site staff supplied by the consultants. 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. The consultants' fees for contract administration and preparation of as-built drawings is calculated in accordance with the existing consultancy agreement. The construction phase of the assignment for the proposed works will only be executed upon Finance Committee's approval to upgrade the proposed works to Category A.
- 3. We will know the actual man-months and actual costs only after completion of the construction works.

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.

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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.

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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.

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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.

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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.

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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.

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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.

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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.

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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.

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