For discussion **PWSC(2006-07)15**
on 29 May 2006

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS
Government Offices – Intra-government services
63KA – Tamar development project

Members are invited to recommend to Finance Committee the upgrading of **63KA** to Category A at an estimated cost of $5,168.9 million in money-of-the-day prices for the design and construction of the Central Government Complex, Legislative Council Complex, open space and associated facilities at Tamar.

PROBLEM

The existing Central Government Offices and Legislative Council (LegCo) Building cannot meet demand in terms of requirements for office space and modern working environment.

PROPOSAL

2. The Director of Architectural Services (D Arch S), with the support of the Director of Administration, proposes to upgrade **63KA** to Category A at an estimated cost of $5,168.9 million in money-of-the-day (MOD) prices for the design and construction of the Central Government Complex (CGC), LegCo Complex (LCC), an open space no less than 2 hectares (ha) and associated facilities at Tamar.

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PROJECT SCOPE AND NATURE

3. The scope of **63KA** comprises the design and construction of -

(a) the CGC, with a total construction floor area (CFA) of 124 680 square metres (m^2) and consisting of -

(i) a low block for accommodating the Chief Executive's Office, the Executive Council and Secretariat, and ancillary facilities; and

(ii) office block(s) for accommodating offices with core policy formulation functions, including offices for the Chief Secretary for Administration, the Financial Secretary and other policy bureaux, with other ancillary facilities;

(b) the LCC, with a total CFA of 36 230 m^2 and consisting of -

(i) a low block for accommodating the LegCo Chamber and ancillary facilities; and

(ii) high block(s) for accommodating Members' offices, staff offices of the LegCo Secretariat, and ancillary facilities;

(c) an open space with a minimum area of two ha, which will be landscaped and designed for the leisure of the public;

(d) 500 car parking spaces[1], loading and unloading areas, and other ancillary facilities such as mechanical plant rooms with a total CFA of 41 000 m^2 for the CGC and the LCC; and

(e) two covered pedestrian footbridges connecting -

(i) the southern part of the Tamar development with Admiralty, close to the transport interchange; and

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[1] The 500 car parking spaces include 380 car parking spaces for the CGC and 120 car parking spaces for the LegCo Complex.

(ii) the eastern part of the Tamar development with the existing footbridge system linking the CITIC Tower.

4. A site plan is at Enclosure 1. We aim to start construction works around mid 2007 for completion around late 2010.

JUSTIFICATION

Shortage in office space

5. Both the Government Secretariat and the LegCo have been facing serious shortage of office space. The offices of the Chief Executive, Chief Secretary for Administration, Financial Secretary and the 11 policy bureaux cover over 8 000 staff, and currently occupy some 166 000 m^2 of office space in terms of Net Operating Floor Area (NOFA). The Central Government Offices (CGO) and Murray Building (MB) can only accommodate 2 100 of these staff within a space of 39 600 m^2, also in terms of NOFA. Nine of the 11 bureaux have offices spread over two or more premises. This is not conducive to operational efficiency. The split locations also make it necessary for certain basic facilities (e.g. conference rooms) to be duplicated. There is therefore a clear need to rationalise the office plans for the government policy units.

6. The LegCo has a total of 60 Members and around 330 staff. Since the LegCo Building is not large enough to meet LegCo's space requirement, the LegCo has offices scattered in nearby commercial buildings (Citibank Tower and Prince's Building) and CGO West Wing. The total area of the existing premises used by LegCo is about 9 410 m^2 (NOFA).

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Physical constraints of existing buildings

7. The physical constraints of the CGO and MB, which have been in operation for over 45 and 35 years respectively, have made it extremely difficult for major alteration or refurbishment to be undertaken in an efficient and cost-effective manner to meet the present day information technology (IT), telecommunications and electronics requirements. The cable trunks, network rooms and server rooms are reaching their maximum capacity. There is inadequate physical space for expansion. The floor-to-floor height of the existing CGO is only around 3 metres (m), compared with the 4 m to 4.5 m of modern offices. The ceiling voids above the corridors are already filled to their full capacity and completely packed with services and air-conditioning ducts. These conditions have limited the flexibility for carrying out renovation and upgrading of IT facilities. Temporary relocation of offices and equipment to make way for the upgrading or renovation works would cause serious disruption to the normal and effective operation of the Government Secretariat. The ageing of the buildings also poses serious structural constraints for effective maintenance of existing facilities, not to mention the urgent need for expansion.

8. The LegCo Building was constructed in 1911 and formerly housed the Supreme Court. Since its exterior is a declared monument, it would be difficult to carry out substantial upgrading and alteration works for accommodating new IT, telecommunications or electronics facilities.

9. The proposal to develop the purpose-built CGC and LCC will be a long-term solution for the above problems.

Proposed development

10. The Tamar site is about 4.2 ha, comprising an area of about 2.2 ha zoned "Government, Institution or Community" ("G/IC"), and an area of about 2 ha zoned "Open Space" (O) on the approved Central District (Extension) Outline Zoning Plan (OZP) No. S/H24/6 which is currently in force.

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11. In April 2002, the Government announced the plan to develop Tamar as Hong Kong's prime civic core. The project obtained support from the LegCo Panel on Planning, Lands and Works and the Public Works Subcommittee in April and May 2003 respectively, but was shelved later that year in view of the impact of the SARS outbreak. With the improvement in economy and public finance situation, the Government announced in October 2005 the relaunch of the Tamar development project. The relaunch is hence in essence a continuation of the Tamar development project then.

12. The scope of the relaunched project covers the proposed CGC, LCC, open space and other ancillary facilities. In order to develop Tamar as the prime civic core of Hong Kong, we would require the design of the new development to project Hong Kong's position as a cosmopolitan city and Asia's world city. The design scheme for the development should as a whole be responsive to the urban fabric of the Central District as well as the natural context of the waterfront setting and the backdrop of Victoria Peak. The distinct identities of the CGC and LCC should be duly reflected taking into account their respective constitutional roles.

13. The CGC and LCC would be constructed adopting the concept of intelligent buildings utilizing the latest information and telecommunications technologies as far as practicable. Staff productivity and effectiveness will be enhanced under a collaborative working environment through the integration and deployment of IT and telecommunications infrastructure, building and security facilities management and centralized management of shareable computer assets. Furthermore, the Tamar offices will facilitate more efficient measures for information security, adaptability to new technologies, and will be environment and user friendly.

14. In putting forward the current proposal, we have taken into account the public's aspirations for as much open view as possible to the ridgeline and the harbour. For instance -

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(a) We have tightened up the height restriction of the Tamar development. Under the approved Central District (Extension) OZP No. S/H24/6, the maximum building height of development on the "G/IC" zone of the Tamar site is 180 mPD. From the outset of the relaunch, the Administration has offered to tighten up the height restrictions to 130 mPD – 160 mPD, to ensure at least a 20% "building-free zone" below the ridgeline which we will seek to protect. The effect of the new height restrictions is attached at Enclosure 2.

(b) we will also require tenderers to take into due account -

(i) the Urban Design Guidelines under the Hong Kong Planning Standards and Guidelines;

(ii) the Vision and Goals for Victoria Harbour promulgated by the Town Planning Board. This aims to make the harbour "attractive, vibrant, accessible and symbolic"; and

(iii) the Harbour Planning Principles formulated by the Harbour-front Enhancement Committee. This emphasizes creating "a harbour for the people and a harbour of life".

15. To reduce site density, we have critically reviewed the space requirements for CGC and trimmed this by 10% in terms of NOFA or 8.5% in terms of CFA. For the CGC and LCC as a whole, the current proposal involves an 8% cut in terms of NOFA or 8.9% cut in terms of CFA compared with the 2003 requirements.

Scale of development and plot ratio

16. The CFA, Gross Floor Area (GFA) and NOFA for the CGC, LCC and the project as a whole are set out in Enclosure 3 The relations of the different units of measurement are set out in Enclosure 4. They are intended to serve different purposes. Generally, CFA is used to measure construction cost, GFA the plot ratio, and NOFA the actual internal space requirements following Government's own space standards. Worth noting are the following -

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(a) Compared with the 2003 proposal, there has been a **substantive** cut of some 8% (NOFA) or 8.9% (CFA) in the space of the proposed CGC and LCC. If the excision of the exhibition gallery is also taken into account, the cut is to the tune of 18% (CFA) to 20% (NOFA).

(b) The construction unit cost for Tamar is estimated at around $11,600 per m^2 (after deducting the average unit fitting-out cost to facilitate comparison). This is **lower** than the average unit cost of $13,000 per m^2 for Grade A commercial premises in the private sector.

(c) The development plot ratio of the CGC and LCC on the "G/IC" portion of the Tamar site has dropped from about 6.2 (based on 2003's area requirement and excluding the exhibition gallery) to currently around 5.7. This is **significantly lower** than those of the adjacent existing commercial developments with plot ratios ranging from around 13 to 18.

Central Government Complex

17. The new CGC will bring together offices of the Chief Executive, Executive Council and Secretariat, 11 bureaux and other main offices within a centralised modern development. It will provide sufficient and up to standard supporting ancillary facilities. This more convenient and rational accommodation arrangement will improve the operational efficiency of the Government Secretariat.

18. The CGC should be a modern government office complex meeting the functional and operational requirements of the Executive. The design would not be opulent or ostentatious. The CGC would be -

(a) efficient and effective in its use of space, highly adaptive to meet future changes and advancement in technology; and

(b) able to accommodate future alternation and expansion with built-in flexibility in the building design to facilitate changes in office layouts, IT networking systems and other office facilities.

19. The total number of staff to be accommodated in the new CGC would be around 3 270. The number of car parking spaces will remain at 380, same as the number for the existing CGO and MB. Since the CGC is expected to meet the long-term requirements for the Government Secretariat, we have factored in an expansion factor of 10%. In overall terms, there remains a net reduction of some 10% in terms of NOFA required by the CGC, from 69 330 m^2 to 62 340 m^2. A table summarising the existing and planned arrangements for accommodating the relevant offices and facilities is at Enclosure 5.

20. The Government has exercised the most stringent control in determining which bureau offices are to be moved into the new CGC. With a total staff complement of over 8 000 working in various central offices and policy bureaux; and with the new CGC accommodating only about 3 270 staff in units with core policy formulation contents, over 5 000 plus staff would remain in outstations. An indicative breakdown of the latter is set out below –

(a) We would not provide office accommodation in Tamar for the bulk of staff in former departments which have merged with their respective bureaux, including units in the Environmental Protection Department which are currently part of the Environment, Transport and Works Bureau, the Office of the Government Chief Information Officer which forms part of the Commerce Industry and Trade Bureau (CITB), and Labour Department headquarters which is part of the Economic Development and Labour Bureau (EDLB). Similarly, most of the executive arm of the Education and Manpower Bureau, formerly the Education Department, would remain outside Tamar. The indicative number of staff involved, which would remain outside the CGC for this reason, totals around 4 500.

(b) Furthermore, we have screened out some bureau teams or units the policy content of which is less direct. These include the Travel Agents Registry under Tourism Commission of EDLB; Official Language Division and Civil Service Training and Development Institute of Civil Service Bureau, Civic Education Resource Centre of Home Affairs Bureau; Narcotics Division, Long-term Prison Sentences Review Board, and Security and Guarding Services Industry Authority of Security Bureau; the Public Service Broadcasting Review Committee of the CITB; and the Office of the Commissioner of Insurance and Insider Dealing Tribunal of the Financial Services and the Treasury Bureau. The number of staff involved that would remain outside Tamar for this reason is estimated to be in the order of 600.

LegCo Complex

21. The new LCC should project the independent status of the Legislature. The external architectural expression, built form and interior design of the Complex should fully reflect the dignified and highly transparent image of the Legislature. The LCC should be free standing on the project site. It should have its own identity on the site, and should be distinguishable from the rest of the development on the Project Site.

22. The LCC should comprise one low block and at least one other higher block. The low block which houses the major meeting facilities and area for the public should provide a sense of volume, avoid build-up of noise and create appropriate ambience. The building height of the higher block(s) should not exceed 86 m measuring from the street level to the level of roof over the highest usable floor space in the block(s) concerned.

23. A table showing the existing and planned arrangement of the LCC is at Enclosure 6. To cater for future development, such as possible increases in number of Members and staff, we have planned for construction of a large LegCo Chamber that could accommodate up to 120 LegCo Members. As agreed with the LegCo Commission, the tenderers should give sufficient flexibility in the design and building structures to allow future expansion in both meeting facilities and offices. A maximum of 9 200 m^2 will be allowed for potential expansion of the LCC as a whole (2 300 m^2 would be required for an increase of every 15 LegCo seats). There will be 120 car parking spaces in the future LCC for Members, staff and visitors.

Open Space

24. Two ha out of the 4.2 ha Tamar site is zoned as "Open Space", which will be developed into a civic place for public enjoyment. The open space will cater for multi-purpose needs, and will be kept open and easily accessible by the public. It will be well connected to the adjoining waterfront promenade through an open at-grade pedestrian deck of a width of 50 to 60 m^2 above the sunken portion of Road P2. The civic place and the adjoining waterfront promenade will together provide about 10.8 ha of public open space in total, forming an integrated open space network at the Central waterfront.

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[2] Approximately the width of a soccer field of international standard (i.e. 64m x 100m).

/**Pedestrian** .....

Pedestrian footbridges

25. The two proposed pedestrian footbridges will provide safe, covered and convenient access to the CGC, LCC, the open space and the waterfront promenade.

26. The footbridge connecting Admiralty to Tamar will be about 10 m wide (about 12 m in terms of construction width), and the one connecting to the existing footbridge system linking the Citic Tower will be about 6 m wide. For reference, the footbridge connecting the Wan Chai MTR station to Immigration Tower is about 7 m wide. The tenderers will be required to propose the detailed design and alignment of the footbridges. Their completion would not only facilitate users and staff of LCC and CGC, but also members of the public moving to and from the Central Business District. With the proposed pedestrian footbridges, we expect that it would take two minutes to walk from the buildings above the MTR Admiralty station to the Tamar site and about 10 minutes through the open deck linkage to the waterfront promenade.

27. We will seek the necessary authorisation for the construction of the footbridges under the Roads (Works, Use and Compensation) Ordinance (Cap 370) when the accurate alignment has been determined.

Underground development

28. As set out in the Prequalification Document, we have encouraged the applicants to explore the option of "underground car park". In response to the strong public sentiment of keeping the building heights to the minimum necessary, the tender document will state that to the extent possible, the following facilities can be provided underground -

(a) the bulk of car parking spaces;

(b) plant rooms; and

(c) certain communal facilities, such as shredding room, paper recycling depot, building management rooms and maintenance facilities.

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29. The indicative CFA of the above facilities, if provided underground, amounts to some 25 830 m^2, which means a maximum of around 20% of the CFA of CGC could be built underground. These facilities have initially been identified as appropriate to be provided underground because their location would not substantially affect their functional and operational needs. We wish to highlight that for the same area, underground construction cost may be about two times of those above ground. Underground accommodation would require more space and servicing to allow the facilities to function underground, such as additional escape staircases, ventilation and smoke extract systems, plant rooms, etc. It is generally considered a less cost-effective option.

Future use of the CGO/MB

30. The CGO and MB sites are currently zoned "G/IC" on the approved Central District OZP No. S/H4/12 to reflect their existing uses as government offices. The future use of these sites and the buildings concerned after relocation has not been decided.

31. Upon the relocation of the CGO and MB offices to the CGC at Tamar, the Government will actively consider the future use of these two sites. The Government will undertake a comprehensive study of the two sites. In conducting this study, the Government will take into account Hong Kong's overall land use needs, assess the traffic, environmental and infrastructural impacts, and give due regard to the historic value of the sites and the need for tree preservation, protection of the ridgeline, and observance of the Urban Design Guidelines. The Government will also consider public needs and aspirations and the prevailing social and economic circumstances in determining the appropriate use and scale of development, if any.

32. In the event the future proposed use of the sites were to warrant an amendment to the existing "G/IC" zoning on the OZP, the approval of the Town Planning Board (TPB) has to be sought and the statutory planning procedures stipulated in the Town Planning (Amendment) Ordinance will have to be followed. These include exhibition of the proposed amendment for public inspection and comment, and consideration of the public views and representations by TPB. The approval of the Chief Executive in Council is required for any amendment to the OZP.

/ **Prefabrication** .....

Prefabrication

33. Due to security reasons, the Government will impose a mandatory requirement specifying that concrete structural units (i.e. floors, walls, beams and staircases) and concrete external walls of the CGC and LCC cannot be pre-fabricated.

Environmental and Traffic Concerns

34. In specifying our requirements for the design and construction of the various components of the project, we shall encourage the use of new methods and technologies that are environmentally-friendly and conducive to efficient and effective building management and maintenance in the long term.

35. The Subcommittee to Review the Planning for the Central Waterfront (including the Tamar site) set up under the Panel on Planning, Lands and Works has convened three meetings. Some Members and deputations attending the meetings have expressed queries and comments on the environmental and traffic implications of the Central Reclamation III (CR III) and Tamar development project. Although the Tamar development lies **outside** CR III, we have analysed these environmental and traffic concerns, details of which are at Enclosure 7 and Enclosure 8 respectively.

36. Since the Tamar project is only a modest office type development, it does not have significant long-term adverse environmental implications at both the construction and operation stages. In addition, the design of the whole development would be sustainable, adaptive to changes, responsive to the environment, and put concepts of sustainability and environmental friendliness in practice. We will require incorporation of environmentally-responsible measures to conserve energy, and minimise pollution and production of waste. We will also make use of the latest and emerging technology in the application of renewable energy to achieve a sustainable design and low life cycle cost.

37. The traffic impact of the Tamar project would be insignificant. With a development plot ratio of 5.7, the peak period traffic would just be 1.0% (morning peak) and 0.7% (evening peak) of the total traffic flow in the Central Business District.

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38. We would endeavour to facilitate pedestrian's access to the waterfront. The footbridges mentioned would enable pedestrians to reach Tamar and the waterfront from the south and east of Tamar. The 2 ha open space at Tamar will be connected to the adjoining waterfront promenade through a 50 to 60 m wide at-grade pedestrian deck. People may also make use of the waterfront promenade to walk from the west (e.g. IFC or Star Ferry) to the open space, CGC and LCC at Tamar.

39. Although Air Ventilation Assessment (AVA) is not a statutory requirement, we will require the tenderers to conduct AVA for their design schemes to assess the impacts on the pedestrian wind environment and ensure good air ventilation effects.

Other options

40. The Government had considered the options of in-situ redevelopment of CGO/MB and use of Kai Tak site. The analyses are at Enclosure 9.

FINANCIAL IMPLICATIONS

41. We estimate the capital costs of the project to be $5,168.9 million in MOD prices (see paragraph 45 below), made up as follows -

	$ Million
(a) Site works	33.6
(b) Piling	229.5
(c) Basement construction	331.4
(d) Building	1,863.7
(e) Building services	1,091.2
(f) Drainage	42.6
(g) External works	92.4
(h) Landscaping works	98.8
(i) Pedestrian footbridges	138.2
(j) IT infrastructure and cabling	95.0

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			$ Million	
(k)	Cooling water supply system for air-conditioning		58.0	
(l)	Furniture and equipment (F&E)		289.6	
(m)	Consultancy fees for		59.7	
	(i) Quantity surveying services	13.0		
	(ii) Electrical, IT, telecommunication, and mechanical engineering services	25.0		
	(iii) Structural engineering and geotechnical services	9.7		
	(iv) Environmental landscape and risk management services	12.0		
(n)	Overseas inspections and factory/laboratory visits		0.3	
(o)	Contingencies		413.4	
	Sub-total		4,837.4	(in September 2005 prices)
(p)	Provisions for price adjustment		331.5	
	Total		5,168.9	(in MOD prices)

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42. Details on the individual components are set out below –

(a) Items (a) and (b) above are for the construction of hoarding; covered walkways with special lighting and graphics; site clearance and levelling including breaking up existing paving, tree protection and transplanting, temporary site drainage and diversion; topographical survey and additional site investigation; survey; geotechnical monitoring work; piling; foundation works, including bored piles, pre-bored H-piles and minipiles.

(b) Item (c) covers basement excavation including dewatering, diaphragm walls, basement screen wall; wearing slab and waterproofing; basement slabs, etc.

(c) Item (d) comprises construction of the superstructure of the low and high blocks of the CGC and LCC.

(d) Item (e) comprises electrical installations, ventilation and air-conditioning; fire protection system; lifts and escalators; window cleansing equipment etc.

(e) Items (d) and (e) include fitting-out of the premises.

(f) Item (f) covers drainage for the open space and underground drainage for the buildings including sump pump house and equipment.

(g) Item (g) covers construction of the open space and other open spaces, also including provision of external lighting and signage; and utilities diversion and connections.

(h) Item (j) is for the provision of network infrastructure, floor cabling, backbone cabling, cable closets and provisions of network management equipment, etc.

(i) Item (k) covers the provision of equipment and construction work for the supply and discharge pipes and fittings for seawater cooling system.

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(j) Item (l) covers general office furniture and equipment items, electronic, security and telecommunications systems, etc. The estimate is made having regard to the recent trend of approved furniture and equipment facilities for other large-scale government offices buildings.

43. We propose to engage consultants to undertake quantity surveying services, electrical, IT, telecommunication and mechanical services, structural engineering and geotechnical services, and environmental, landscape and risk management services. A breakdown of the estimate for consultants' fees by man-months is at Enclosure 10.

44. The total CFA of **63KA** is about 201 910 m^2. The estimated construction unit cost, represented by building and building services costs, is around $14,500 per m^2 of CFA in September 2005 prices. In line with Government's practice, this figure includes the cost of office lighting, office partitioning and carpeting and other fitting-out items. If we use the private market's practice and deduct the average unit fitting-out cost of $2,900 from $14,500, the project's unit-construction cost should be about $11,600 per m^2. Compared with the average unit construction cost of grade-A office buildings in the private market – about $13,000 per m^2 – the unit-construction cost of the Tamar project is very reasonable.

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

Year	$ million (Sept 2005)	Price adjustment factor	$ million (MOD)
2006 – 07	2.0	1.01500	2.0
2007 – 08	400.0	1.03023	412.1
2008 – 09	900.0	1.04568	941.1
2009 – 10	1,600.0	1.06136	1,698.2
2010 – 11	1,100.0	1.07728	1,185.0
2011 – 12	500.0	1.10152	550.8

/**Year** .....

Year	$ million (Sept 2005)	Price adjustment factor	$ million (MOD)
2012 – 13	300.0	1.12906	338.7
2013 – 14	35.4	1.15729	41.0
	4,837.4		5,168.9

46. 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 2006 to 2014.

47. We propose to adopt the Design-and-Build (D&B) approach for implementation of **63KA** as we attach great importance to the design of the project and its integration with the construction process. By adopting the D&B approach, we can ensure quality design submissions by attaching prominent weighting to the design scheme and related requirements. Further, each D&B tenderer is obliged to ensure the cost-effectiveness of the implementation plan for its design, taking full account of technical advances in construction and practical functional requirements put forward by the Government and LegCo. We intend to award the D&B contract on a lump-sum basis because we can clearly define the scope of works in advance, leaving little room for uncertainty. The contract will provide for price adjustments because the contract period will exceed 21 months.

48. The additional recurrent expenditure for the new Tamar development will be around $48.5 million per annum. On the other hand, we estimate that upon completion of the CGC and LCC, around 5 820 m^2 (NOFA) out-stationed commercial office space would be released consequentially, generating direct rental savings of around $31.8 million per annum. In addition, some 12 750 m^2 (NOFA) in total would also be vacated from other Government office buildings, e.g. Southorn Centre, Revenue Tower, Wanchai Tower and premises in Citibank Tower. This would in turn provide reprovisioning or deleasing opportunities for many departments currently housed in split locations. The notional savings would be to the tune of $36.1 million per annum. Hence, the additional recurrent cost of $48.5 million per annum may be offset by the above-mentioned $31.8 million in direct rental savings and possibly $36.1 million as potential savings, from reprovisioning the Government Secretariat and LegCo to Tamar.

PUBLIC CONSULTATION

49. We attended the meetings of the LegCo Panel on Planning, Lands and Works on 21 October 2005, 22 November 2005, 17 December 2005, 25 April 2006 and 11 May 2006, to brief Members on the relaunch of the Tamar development project. We also attended three meetings of a Subcommittee set up under the Panel on 9 February, 7 March and 3 April 2006 respectively to answer Members' questions and listen to the views of deputations. Further, we consulted the Central and Western District Council on 23 March 2006. Some of the District Councillors appealed to the Government to expedite the development of the Tamar site, some expressed reservation and concern over its impacts on the environment and local traffic, whereas some others requested that the feasibility of preserving CGO be explored.

50. Given the unique nature of this iconic landmark project of Tamar, the Special Selection Board (SSB) for the Tamar Development Project chaired by the Chief Secretary for Administration (CS) has agreed that the design models received at the tender stage may be displayed to the public for viewing. The SSB will take into account the public views in assessing the tenders.

ENVIRONMENTAL IMPLICATIONS

51. The project is an office-type development within an urban environment and such developments have limited potential for environmental impact. The project is a not a 'designated project' subject to an Environmental Impact Assessment (EIA) prescribed under the EIA Ordinance (Cap 499). D Arch S completed a Preliminary Environmental Review (PER) in October 1998. The PER concluded that the project would have no long-term environmental impact. The Director of Environmental Protection vetted the PER and agreed that an EIA would not be necessary.

52. During construction, the contractor will be required to adopt suitable pollution control and mitigation measures to control noise, dust and site run-off nuisances. These include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the sites, and the provision of wheel-washing facilities.

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53. We have considered measures in the planning and design stages to reduce the generation of construction and demolition (C&D) materials where possible. In addition, we will require the contractor to reuse inert C&D materials on site or in other suitable construction sites as far as possible, in order to minimize the disposal of C&D materials to public fill reception facilities. We will encourage the contractor to maximize the use of recycled or recyclable C&D materials, as well as the use of non-timber formwork to further minimize the generation of construction waste.

54. We will also require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill, C&D materials and C&D waste to public fill reception facilities, sorting facilities and landfills respectively through a trip-ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

55. We estimate that the project will generate about 341 853 tonnes of C&D materials. Of these, we will reuse about 37 698 tonnes (11.0%) on site, deliver 271 819 tonnes (79.5%) to public fill reception facilities[3] for subsequent reuse, and 5 547 tonnes (1.6%) to sorting facilities[3] in order to retrieve the inert portion for reuse as public fill. In addition, we will dispose of 26 789 tonnes (7.9%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites, together with the cost for handling the materials at sorting facilities is estimated to be $11.2 million for this project (based on an unit cost of $27/tonne for disposal at public fill reception facilities, $100/tonne at sorting facilities and $125/tonne[4] at landfills).

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[3] Sorting facilities and public fill reception facilities are specified in Schedule 3 and Schedule 4 respectively of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of public fill in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

[4] This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at $\$90/m^3$), nor the cost to provide new landfills, (which is likely to be more expensive) when the existing ones are filled.

LAND ACQUISITION

56. The project does not require land acquisition. Subject to the final design and alignment, the construction of the footbridge linking to Admiralty may affect a small number of shops and require resumption and clearance. Any cost of resumption and clearance will be charged to **Subhead 1100CA** "Compensation and ex-gratia allowances in respect of projects in the Public Works Programme".

BACKGROUND INFORMATION

57. The Executive Council decided in April 2002 to launch the Tamar development project. The scope of the project then included the proposed CGC, LCC, Exhibition Gallery, Civic Place and other related facilities. We subsequently initiated a two-stage procurement exercise for the D&B contract for the project. In December 2002, we prequalified five applicants for the second stage tender exercise.

58. On 7 May 2003, we consulted this Subcommittee and obtained its support for the project. However, the Government decided later that month to put on hold its submission to the Finance Committee amidst the outbreak of SARS. In November 2003, the Government announced the decision to defer the project, having regard to its financial position and the political climate. We accordingly informed the five prequalified applicants that the tender and procurement exercise for the D&B contract for the Tamar project was terminated.

59. As the Chief Executive announced in his Policy Address on 12 October 2005, the Government considers it timely to relaunch the Tamar development project. We continue to adopt the D&B approach to implement the project and initiate a two-stage tender exercise accordingly. We have completed the prequalification exercise and announced the result in May 2006. We will finalise the user requirement and, subject to the funding approval of Finance Committee, proceed to the Stage II tendering in the third quarter of 2006.

60. The SSB for the Tamar Development Project set up to oversee the prequalification as well as tender exercise is chaired by the CS, with two LegCo Members, two senior Government officials and a professor in architecture as Members. It operates in accordance with the required principles of the WTO Agreement on Government Procurement, and will ensure impartial and independent assessment and selection of tender.

/61. .....

61. We first upgraded **63KA** to Category B in September 1998. We conducted the site investigation work and the pre-contract consultancy services for topographical survey and other services relating to the preparation of preliminary project feasibility study, including PER, traffic impact assessment, underground utility diversion, value management workshop and preparation of prequalification and tender documents at a total cost of $14.98 million. The expenditure has been charged to the block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme".

62. The proposed development will involve removal of 27 trees, all of which will be transplanted elsewhere. All trees to be removed are not important trees[5]. We will incorporate planting proposals to ensure a predominantly green 'park-like' environment appropriate in this harbour-front location. We estimate that some 400 trees and 25 000 shrubs would be planted within the Tamar site, the exact figure would be subject to design of the successful tenderer.

63. We estimate that the proposed works under **63KA** will create about 2 700 jobs (2 420 for labourers and another 280 for professional/technical staff) providing a total employment of 73 000 man-months.

Director of Administration
May 2006

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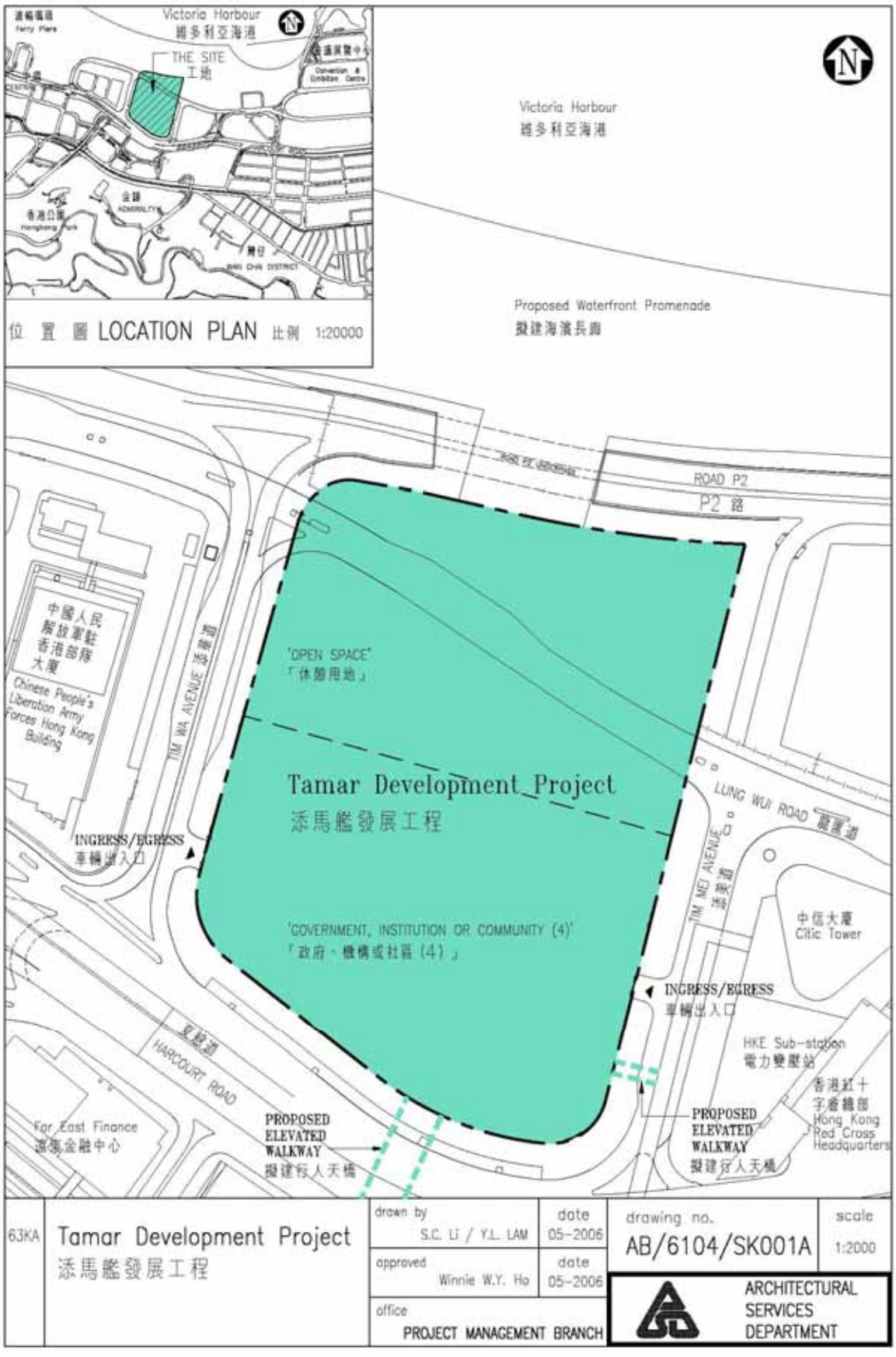
[5] Important trees refer to trees on the Register of Old and Valuable Trees, and any other trees which meet one or more of the following criteria –
(a) trees over 100 years old;
(b) trees of cultural, historical or memorable significance;
(c) trees of precious or rare species;
(d) trees of outstanding form; or
trees with trunk diameter exceeding one metre (measured at one metre above ground level).


Victoria Harbour
維多利亞海港
THE SITE
工地
位 置 圖 LOCATION PLAN 比例 1:20000
Victoria Harbour
維多利亞海港
Proposed Waterfront Promenade
擬建海濱長廊
ROAD P2
P2 路
中國人民解放軍駐香港部隊大廈
Chinese People's Liberation Army Forces Hong Kong Building
TIM WA AVENUE 添華徑
'OPEN SPACE'
「休憩用地」
Tamar Development Project
添馬艦發展工程
'GOVERNMENT, INSTITUTION OR COMMUNITY (4)'
「政府、機構或社區(4)」
INGRESS/EGRESS
車輛出入口
LUNG WUI ROAD 龍匯道
TIM MEI AVENUE 添美道
中信大廈
Citic Tower
INGRESS/EGRESS
車輛出入口
HKE Sub-station
電力變壓站
香港紅十字會總部
Hong Kong Red Cross Headquarters
PROPOSED ELEVATED WALKWAY
擬建行人天橋
PROPOSED ELEVATED WALKWAY
擬建行人天橋
HARCOURT ROAD 夏慤道
Far East Finance
遠東金融中心
63KA
Tamar Development Project
添馬艦發展工程
drawn by S.C. Li / Y.L. LAM
date 05-2006
approved Winnie W.Y. Ho
date 05-2006
office PROJECT MANAGEMENT BRANCH
drawing no. AB/6104/SK001A
scale 1:2000
ARCHITECTURAL SERVICES DEPARTMENT

PROTECTION OF RIDGELINE

Floor Areas of Central Government Complex (CGC) and LegCo Complex (LCC)

2006 estimate	Net Operating Floor Area (NOFA)	Gross Floor Area (GFA)	Construction Floor Area (CFA)
CGC	62 340 m^2	99 744 m^2	124 680 m^2 Note 1
LCC	16 090 m^2	26 243 m^2	36 230 m^2 Note 1
Other area Note 2	N.A.	N.A.	41 000 m^2 Note 2
Total	**78 430** m^2	**125 987** m^2	**201 910** m^2

Note 1: This includes plant rooms (for air-handling units, lift machine rooms, etc.), refuge floor, etc. for individual building(s).

Note 2: "Other area" includes the bulk of car parking spaces, common plant rooms, loading and unloading areas, etc. These facilities commonly serve the CGC, LCC and the open space.

Relation of floor area measurement units
Net Operating Floor Area (NOFA), Gross Floor Area (GFA) and Construction Floor Area (CFA)

Existing and Planned Arrangements for Office Accommodation – Central Government Complex (CGC)

Facilities	Existing Area for units moving to CGC (m^2)	Area required in new CGC (as set out in 2003 PWSC paper) (m^2)	Area required in new CGC (projection in 2006) (m^2)
1. Chief Executive's Office	1 160	1 566	1 580
2. Executive Council and its Secretariat	880	1 188	1 150
3. Chief Secretary for Administration's and Financial Secretary's Offices, including Administration Wing and other offices Note 1	6 880	7 433	6 770
4. Offices of Bureaux Note 2	42 890 Note 6	47 952	38 660 Note 6
5. Common and Ancillary Facilities	3 050 Note 3	7 892	8 510 Note 4
Sub-total	54 860	66 031	56 670
Allowance for expansion		3 302 (5%)	5 670 (10%)
TOTAL	**54 860** Note 5	**69 333**	**62 340**

Note 1 : Other offices include the Central Policy Unit, Sustainable Development Unit, Economic Analysis and Business Facilitation Unit, etc. Office of the Secretary for Justice not included.

Note 2 : Existing offices of 11 bureaux, whether located in the Central Government Offices / Murray Building, leased premises or other government owned premises.

Note 3 : The figure covers Common and Ancillary Facilities in the Central Government Offices/Murray Building only.

Note 4 : Common and Ancillary Facilities at the new CGC include multi-purpose hall, press rooms, conference rooms, building management offices, common server rooms, etc. Many of these facilities are inadequate or not provided in the current CGC and MB. Breakdown of common and ancillary facilities is at **Annex** to this Enclosure**.**

Note 5 : Breakdown of space provision for relevant offices and bureaux -

		Existing Area for units moving to CGC (m^2)
(a)	Central Government Offices/Murray Building	39 610
(b)	Commercial Leased Premises	5 520
(c)	Government-owned Premises	9 730
	TOTAL	**54 860**

Note 6 : The sub-total of existing area of Bureaux Offices (Item 4) and Common and Ancillary Facilities (Item 5) is 45 940m^2. Required area for the same in the new CGC is 47 170 m^2, representing a net increase of 1 230 m^2. This is reflecting mainly the net outcome of decrease in bureaux's accommodation requirement and enhancement of the communal ancillary facilities at the new CGC.

In our updating exercise, we have stringently trimmed down bureaux's requirements, including both staff offices and ancillary facilities. For staff offices, units/sections that are not mainly involved in policy-making functions have been screened out and would not be relocated to the new CGC. We have also substantially cut down bureaux's ancillary facilities area by lowering their provisions for storage, filing, meeting rooms, etc.

On the other hand, we have strengthened communal facilities at the new CGC, with enhanced facilities to be used by bureaux on a shared basis. Major enhancements include an increase in area for press rooms (+750m^2), conferencing facilities (+820 m^2) and common server room (+1 000m^2). In addition, we have also achieved a saving of around 1 355 m^2 through merging the banquet hall originally proposed for the Low Block, and the multi-purpose hall in the Office Block.

Annex to Enclosure 5

Breakdown of Common and Ancillary Facilities in Central Government Complex (CGC)

		m^2 (NOFA)
Common and Ancillary Facilities in CGC		
(a)	Multi-purpose Hall with capacity for 1 000 standing persons for holding large reception and a seating capacity of 480 persons. The Hall could be partitioned into several small halls for medium-scale functions, conferences, meetings, seminars, etc.	1 330
(b)	Supporting facilities for the Multi-purpose Hall, including kitchen, drawing rooms, SI booths, technical/control rooms, store room, etc.	920
(c)	Common Server Rooms/Floor	1 900
(d)	12 Conference Rooms of various sizes (holding an average of around 40 persons) to be shared by all bureaux/offices;	1 180
(e)	2 Press Rooms fully equipped with SI/technical/control rooms, cubicles for live TV/radio broadcast, reporters' room, etc.	910
(f)	Building Management and Site Maintenance Offices/Workshop ● Building management room, security control room, security guard changing room, etc. with integrated and centralized backup facilities ● Maintenance offices and store rooms for electrical and mechanical systems and equipment; air-conditioning plant office/workshop, etc.	340
(g)	Common Reception/Waiting Areas and Waiting Rooms ● Adequate reception and waiting areas/rooms are required at entrances and lift lobbies of each floor.	700
(h)	Other ancillary facilities such as small discussion corners, drivers' room, shredding room, paper recycling depot, circulation areas, etc.	1 230
	Total (NOFA):	**8 510**

Existing and Planned Arrangements for Office Accommodation – LegCo Complex (LCC)

	Facilities	Existing area (m^2)	Area required in the new LCC (as set out in 2003 PWSC paper) (m^2)	Area required in new LCC (Projection in 2006) (m^2)
1.	Members' offices and facilities	2 820	4 160	4 160
2.	Staff offices	3 050	3 550	3 640
3.	Meeting facilities (including the Chamber)	820	3 652 **Note 1**	3 650
4.	Ancillary facilities **Note 3**	2 720	4 640	4 640
	Total area	**9 410**	**16 002**	**16 090**
			(Potential expansion in future: 9 200 m^2) **Note 2**	
5.	Car parking spaces	30	120	120

Note 1: The Chamber will be able to accommodate 120 Legislative Councillors. Area for expansion has already been incorporated in the Chamber since it is technically not easily expandable in future.

Note 2: In addition to the space requirements for the LCC set out above, the Legislative Council Commission has agreed that an area of 2 300 m^2 would be required for an increase of every 15 Legislative Council seats in future. Tenderers will be required to allow room for the potential expansion of up to 60 seats, involving a further 9 200 m^2. The implementation of any such expansion plan will be subject to the outcome of relevant future policy review and availability of funding.

Note 3: Ancillary facilities include the Ante-Chamber, press facilities, library, facilities for the redress system, dining facilities, computer server rooms, printing rooms and building management rooms, etc.

Environmental Concerns and Implications of the Tamar Development Project and Central Reclamation III

In view of the public's concerns over the environmental impacts of the Tamar development project, this Enclosure sets out how the Administration has addressed these concerns and provides clarification to some misunderstandings.

ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE (Chapter 499)

2. Under Schedule 3 of the Environmental Impact Assessment Ordinance (EIA Ordinance), engineering feasibility studies of urban development or redevelopment projects covering more than 20 hectares or involving a total population of more than 100 000 are classified as "designated projects" and are required to conduct "Environmental Impact Assessment" (EIA).

3. Under Schedule 2 of the EIA Ordinance, there are certain categories of "designated projects" that require both an EIA and an Environmental Permit to construct and operate (e.g. major distributor roads, reclamation, and railway protection works).

4. According to the EIAO, the Central Reclamation III (CR III) project was required to complete a Schedule 3 EIA. Since the development also involves some essential transport infrastructure including the new reclamation, the Central & Wan-chai Bypass and the Road P2 network, these Schedule 2 "designated projects" were also assessed and included as part of the CR III EIA. The major findings of the CR III EIA are highlighted in paragraphs 20 to 26 below.

5. On the other hand, office development in an urban environment, like the construction of the Central Government Complex (CGC) and the LegCo Complex (LCC) of the Tamar development project, has limited potential for environmental impacts if standard pollution control measures are implemented. The Tamar project is not a "designated project" and no statutory EIA is required under the EIA Ordinance.

TAMAR DEVELOPMENT PROJECT

6. Although the Tamar project is not subject to an EIA, Architectural Services Department, the works department for the Tamar project, undertook a

preliminary environmental review (PER) in 1998 to assess any possible environmental implications.

Preliminary Environmental Review

7. The PER confirmed that the Tamar development project would not cause long-term adverse environmental impacts arising from both the operation and construction stages. To control the short-term environmental impacts during the construction stage which are mainly construction waste, noise, dust and wastewater from the works site, the PER recommended adoption of environmental control and mitigation measures such as the regular wetting of works surface, use of quiet power mechanical equipment, segregation of different types of wastes, etc. The report confirmed that no insurmountable environmental impact would arise from the construction stage.

8. As regards the operational stage of the Tamar development, the PER recommended incorporation of environmental controls in the design requirements such as proper disposition of the buildings, proper location for the exhaust point of ventilation system, good waste collection system, etc. No long-term environmental impacts from the project are expected.

9. The PER also highlighted some areas requiring attention during the detailed planning and design stage to protect users of the future offices, such as proper ventilation design for underground car park, and provision of central air conditioning system with appropriately located fresh air intakes.

10. The Government will implement the said environmental control and mitigation measures to ensure least impacts of the project during both the construction and operation stages.

Air quality impacts of the Tamar project

11. Traffic is a major reason impacting on air quality. In its submission to the Expert Panel Forum on Sustainable Transport Planning and Central-Wan Chai Bypass of the Harbour-front Enhancement Committee in September 2005, the Transport Department (TD) assessed that the traffic flow at the peak hours of the Tamar project when in operation would be 1 924 passenger car units (pcu) (morning peak) and 1 286 pcu (afternoon peak). According to TD, these figures only amount to some 3.4% and 2.3% of the total traffic flow in the Central Business District (CBD) respectively. However, this assessment is based on the "maximum" development intensity of the CGC and LCC at 15 and 12.5

respectively. As stated in the PWSC paper, the existing development plot ratio of the GCC and LCC would go down to about 5.7, hence the percentages would drop further down to 1.0% (morning peak) and 0.7% (afternoon peak) of the CBD's total traffic flow. On average, it will be less than 1%. The traffic impact of the Tamar project on the air quality is therefore insignificant.

"Canyon Effect" and the Tamar project

12. There were concerns raised that the Tamar development project would create "Canyon Effect" causing serious air pollution in the vicinity of the Central District.

13. "Canyon Effect" is referring to the creation of an air stagnation zone by long and tall buildings without gaps in between along both sides of a street, which hinders dispersion of air pollutants released within the street. Apart from the building height and the width of the road, the length of the building is also relevant in considering if there is indeed a "canyon" in place. EPD has advised that there is no existence of such a "canyon" in the context of Tamar.

14. For the areas around the Tamar site, the major roads (e.g. Harcourt Road) are bisected by several other roads (e.g. Tim Mei Avenue and Tim Wa Avenue), and there is open space allowing air to flow through. Hence, the "Canyon Effect" would not be a concern for the Tamar development project.

15. The presentation of "Canyon Effect" by concerned groups (e.g. at the meeting of Subcommittee to Review the Planning for the Central Waterfront (including the Tamar Site) under the LegCo Panel on Planning, Lands and Works on 3 April 2006) was primarily based on a 2-dimensional model, which assumes that the two sides of the "wall" do not allow any air to flow through as there are no gaps or space between these buildings. The model is, therefore, not applicable to the area around the Tamar site as there is space left between the surrounding of the site and other buildings in the proximity. In reality, the air circulation around the Tamar development is 3-dimensional because of the land use pattern and the disposition of various buildings and open space. There are also air flows along the road and around various buildings to disperse pollutants. A 2-dimensional model is not appropriate for a real situation around the Tamar site. To the east of the Tamar, there is the Tin Mei Avenue; to the west, there is the Tin Wa Avenue. There is the Harcourt Garden to the Southeast of the site. The HK Red Cross is a relatively low to medium rise building. There is also space between the Admiralty Centre and Far East Finance Centre with the Tamar Street in between. Hence, the 2-dimensional model is not reflecting the likely situation upon completion of the Tamar project.

16. Further, there would be space between the different buildings to be developed on the Tamar site, as there would be some separate blocks of building instead of a wall, including low block and office block(s) of CGC, and low block and high block(s) of the LCC, to be developed on the Tamar site.

Air Ventilation Assessment for the Tamar development project

17. We will require the tenderers to conduct Air Ventilation Assessment (AVA) for their design schemes, in order to ensure better air ventilation. The aim of AVA is to assess the impacts of the tender design proposals on pedestrian wind environment. The result would form part of the considerations in selecting the tender design.

18. Planning Department commissioned the "Feasibility Study for Establishment of AVA System in Hong Kong in 2003". According to the findings of the study, the AVA work methodology allows design options to be compared so that a better design in terms of city air ventilation could be objectively identified. The focus is to allow better layout design of developments and planning of the urban fabric. Wind Velocity Ratio (VRw) is used as the indicator. A design having a higher velocity ratio would be considered better than one having a lower velocity ratio.

19. The Technical Requirement for AVA for the tender submissions of the Tamar Project is now under preparation. The Requirement shall be followed by the tenderers to carry out AVA to assess the impacts of the tender design on the pedestrian wind environment. This would help ensure better air ventilation of the project and the area as a whole.

ENVIRONMENTAL IMPACT ASSESSMENT OF CR III

20. The EIA Report for the CR III project was approved in 2001, and has been uploaded to the EIAO website since 2001.

21. There have been criticisms that the EIA conducted for the CR III is based on a model assuming the whole Central District a piece of flat land, and hence the outcome of the assessment, particularly on air quality, is not correct.

22. The Administration would like to clarify that the EIA conducted for

CR III has in fact taken into account the existing, committed and planned developments of the district. As the Air Quality Objectives are defined as ambient standards, all buildings (or fresh air intake) in the adjacent area of CR III are considered as Air Sensitive Receivers. According to Section 2 of the CR III EIA Report (the Report), a number of commercial and office buildings have been identified as Air Sensitive Receivers. Both the existing commercial and office buildings and future office and commercial buildings are listed as Air Sensitive Receivers in the report. According to Table 2.2 of the Report, the proposed CGC was specifically listed as one of the Future Air Sensitive Receivers (A70).

23. According to Section 2 of the Report, it is specifically stated that commercial and office buildings and a number of hotels dominate the urban area surrounding the CR III site. It is also stated in the Report that these buildings are centrally ventilated and air-conditioned, and the additional CR III road traffic does not generate air pollutant levels which will exceed those of the Air Quality Objectives.

24. It has been shown in Figure 14.19 and Figure 14.20 in the EIA Report that the proposed CGC would be of a maximum height of 180 m PD and the elevation of the buildings was displayed in Figure 14.20. The building layout and heights have been taken into account in the EIA study.

25. The CR III EIA has used a CALINE4 model in assessing air quality impacts of the project. This model is a well-established and proven air quality model acceptable in Hong Kong and internationally for predicting vehicular emission impact. The model is applicable for modeling the air quality of urban areas and has a feature to calculate the canyon and building effect. The model has also been applied overseas for modeling the air quality of densely built urban areas. This model is a 3-dimensional model that calculates the air quality impacts in a 3-dimensional manner. EPD has done measurements in street canyons to determine the plume spread. The value adopted in the air quality modelling is smaller than the measured values, thus giving conservative pollutant concentration.

26. The consultants conducting the CR III modelling assessment had taken into account all these buildings identified in the Section 2 of the EIA Report, and had assumed that emissions from the traffic impinge directly onto the surrounding sensitive receptors. A narrow plume spread (small Sigma value) is used in the model. In and around buildings, turbulence is generated which disperses the pollutants. By using a plume spread with small Sigma value, the plume is more concentrated to impact on the receptor, producing conservative predictions. Such methods of calculations can cater for the effects of the buildings and the canyon effects, if any, on the predicted air quality modeling results.

Major assumptions of the air quality assessment

27. To recapitulate, the air quality assessment was conducted in accordance with the technical requirements under the "Technical Memorandum on EIA Process" and the established practices and models used in Hong Kong and internationally. The assessment has adopted a conservative approach, taking into account the best available information and data at the time of the assessment, including -

(a) emissions from traffic impinging directly on nearby sensitive receivers without being first dispersed by obstacles;

(b) existing and proposed developments scenario at the time of the assessment (the CGC at the Tamar site, CR III, Wanchai Development Phase II and Central Wan Chai Bypass and Island Eastern Corridor Link);

(c) cumulative air quality impact as posed by vehicle emissions from the existing and proposed road network planned within the assessment area and Year 1999 background air quality data collected by the EPD's Central/Western Air Quality Monitoring Station;

(d) peak hour traffic flows with traffic flow projection into Year 2027;

(e) conservative vehicle emission estimates (further reduction of vehicle emissions from Year 2011 to Year 2027 as a result of the implementation of the more stringent vehicle emission control requirements have not been included); and

(f) worst meteorological conditions as inputs to air quality model.

Roadside air monitoring stations

28. Some concern groups said that the air pollutants NO_2 and respirable suspended particles (RSP) were underestimated in the CR III model and lower than those recorded by the roadside air monitoring stations.

29. We would like to clarify that the prediction of the CR III EIA is the air quality at Year 2027 which is the worst case scenario from the commencement of operation of the proposed roads under the CR III to Year 2027. However, the records of the Central Roadside Air Quality Monitoring Station cited are historical

data. The Hong Kong SAR Government and Guangdong Provincial Government have been working closely to implement a comprehensive Pearl River Delta Regional Air Quality Management Plan to reduce the total air pollutant emission in the region. Due to the tightening of vehicle emissions in Hong Kong, the air quality conditions at roadside have showed gradual improvement in recent years.

CR III EIA and the Tamar development project

30. Whilst no EIA is required for the Tamar development project, the Tamar site is covered by the CR III EIA to consider the impacts of the CR III on the Tamar project. The Tamar development project is an air sensitive receiver considered in the CR III EIA. Vehicular emission impacts of the existing and proposed roads in the vicinity of the Tamar site on its development among other sensitive receivers have been assessed. On the other hand, the air quality impacts of the Tamar project to its surrounding due to the additional vehicle flow have been taken into account as the additional traffic flow forms part of the traffic forecast. The additional traffic flow due to the Tamar development is not significant (please refer to paragraph 11 above of this Enclosure). Such type of office development (i.e. CGC and LCC) has limited potential for environmental impacts, provided standard pollution control measures are implemented.

Tamar Development Project and Traffic Implications of Central Reclamation III

In view of the public's concern over the traffic implications of the Tamar development project and Central Reclamation III (CR III), this Enclosure sets out the relevant assessments and provides clarifications.

TAMAR DEVELOPMENT PROJECT

2. Concern has been expressed by some in the community that the proposed Central Government Complex (CGC) and Legislative Council Complex (LCC) of the Tamar development project, when completed and in operation, will attract considerable traffic to the Central Business District (CBD). There have also been criticisms that the proposed developments at Tamar will bring more traffic to the area and thus negate the otherwise positive impact of the planned road networks in CR III which are to provide relief the traffic in Central and its neighbouring districts.

3. The fact is that, according to Transport Department's data, the proposed CGC and LCC, if developed to their "maximum" permissible development plot ratios, i.e. 15 for CGC and 12.5 for LCC, would attract 1 924 passenger car units (pcu) and 1 286 pcu in the morning and afternoon peak periods respectively. Based on Transport Department's 2004 Annual Traffic Census and projecting to 2016, the traffic flow in the CBD during peak hours would be around 57 000 pcu. Hence, the traffic flow that the proposed CGC and LCC, if developed to their "maximum" permissible development plot ratios, would be 3.4% and 2.3% of the CBD's total traffic flow in the morning and afternoon peak periods respectively. On average, it would be about 3%.

4. The development plot ratio of the Tamar project would just be around 5.7 according to our latest estimate. At this scale, the proposed CGC and LCC will attract around 581 pcu and 406 pcu in the morning and afternoon peak periods respectively. Hence, the traffic that they will attract will only be 1.0% and 0.7% of the CBD's total traffic flow in the morning and afternoon peak periods respectively. On average, it will be less than 1%.

5. The Transport Department has also made it clear that given the very insignificant traffic impact of the Tamar development project, the planned

road networks, the Central-Wan Chai Bypass (CWB) and the Road P2 are not necessitated by the Tamar development project.

Vehicular Access to the Tamar Site

6. Since Road P2 within CR III will be completed by 2008, i.e., before the completion of the Tamar development project, vehicles accessing the Tamar site can make use of Harcourt Road or Road P2. Traffic from the west may use Harcourt Road, Tim Mei Avenue to reach the Tamar site, while traffic from the east may use Fenwick Pier Street, Road D11, Road P2 and Tim Wa Avenue to access the Tamar site.

7. Traffic leaving the Tamar site heading west may use Road P2 via Road D11. Traffic leaving the Tamar site heading east may take Harcourt Road or Fenwick Pier Street.

Public Transportation to be provided at the Tamar site

8. The Tamar site will be served by the public transport interchange at Admiralty where MTR, bus, tram and mini-bus services are readily available. A footbridge across Harcourt Road will be provided to facilitate pedestrians commuting between the public transport interchange and the Tamar site. Pick-up/drop-off bays will be provided within the CGC to facilitate visitors travelling by private cars. Pick-up/drop-off bays along Tim Wa Avenue and Tim Mei Avenue will be provided for taxis. Bus stops will be provided along Road P2 at suitable locations.

CENTRAL RECLAMATION III

Existing Traffic Situation of the Central Reclamation Area

9. The existing traffic situation in the Central Reclamation Area is not satisfactory. This is because the predominant traffic movement on the northern shore of Hong Kong Island is in the east-west direction along the Connaught Road Central/ Harcourt Road/ Gloucester Road trunk road corridor (the Corridor). This is attributable to the concentration of commercial and business areas in CBD, which generate considerable traffic throughout the day.

10. The Corridor is already operating beyond its design capacity currently. Congestion along the Corridor is not limited to the typical morning and evening peak hours. Regular traffic congestion can be observed between 8

a.m. and 8 p.m. during weekdays. This adverse traffic situation will not be improved until additional road infrastructures within the Central Reclamation Area, such as the Road P2 network and the CWB are in operation.

Planned Transport Infrastructures in Central Reclamation Area

11. As part of the CR III project, a detailed Traffic Impact Assessment (TIA) has been carried out at various stages and with new transport infrastructures proposed to cope with the anticipated traffic demand. The new road network comprises Road P2 which runs along the east-west direction as the backbone with various transverse distributor roads running north-south to allow for traffic circulation. Road P2 in CR III will connect the existing Man Cheung Street on CR I (between the Airport Railway Station and Two International Finance Centre) to Fenwick Pier Street. This new road network will support the developments in CR II and CR III and also provide relief to the existing congestion problem along Man Yiu Street, Harbour View Street and Connaught Place in CR I.

12. The results of the TIA completed previously indicate that all the new road links within the Central Reclamation Area would operate well within their design capacities. The critical section of Road P2, where it would still be operating satisfactorily and without capacity problem, would be the underpass section outside the Tamar site. Two traffic lanes would be provided for each direction there.

13. The findings of the TIA also reveal that the critical aspect to the operation of the new road network will be the junction performance, rather than the free-flow road sections. With turning pockets provided at critical junctions to enhance their efficiency, all junctions along Road P2 would operate with spared reserve capacity.

Planned Transport Infrastructures at Strategic Level

14. The CWB is the last, but yet to be built section of a strategic highway running along the northern part of the Hong Kong Island. It will connect the existing flyover near Rumsey Street at Central to the existing Island Eastern Corridor at Causeway Bay. Government's Comprehensive Transport Study models since the late 1980s and a Transport Expert Panel made up of leading local and overseas transport planning experts in 2005 have confirmed the need for CWB. The Government is actively planning for the construction of the CWB.

15. If we have the CWB and Road P2 in place, even with the planned developments in Central Reclamation Area by 2016, the volume to capacity ratio[1] of the roads in Central and Wan Chai would in general, be below 1.0, i.e., the roads would be operating within capacity by 2016.

Interim Traffic Management Measures to Tackle the Increasing Traffic Volume

16. It is always the Government's intention to expedite the construction of the CWB to further relieve the traffic congestion problem along the northern part of Hong Kong Island. As the completion of the CWB will likely be beyond 2010, the Government will proceed with the construction of Road P2 and with short-term traffic management measures such as load/unloading restrictions, junction improvement, public transport route rationalization, etc., to tackle the traffic congestion in the CBD prior the opening of the CWB.

Public Transportation Facilities

17. To serve the Central Reclamation Area, different kinds of public transport interchange facilities adjacent to the ferry piers of the Central Reclamation Area, with a bus terminus, green minibus (GMB) stands and taxi stands as well as a dedicated loading/unloading and pick-up/drop-off bays for coaches, cars and taxis near the public landing steps will be provided. Service provisions have been based on the premise that all existing facilities should be relocated within the new public transport interchange, with sufficient flexibility to absorb new or relocated routes and services. The majority of GMB services currently operating near the Edinburgh Place will be relocated to the south of Road P2 near Man Yiu Street. The remainder will operate from the ferry pier facility to enhance modal interchange for ferry passengers.

Pedestrian Access

18. The hierarchy of pedestrian facilities with the Central Reclamation Area generally dictates that short distance walking trips are undertaken at street level while longer distance trips use the footbridge network

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[1] Volume/capacity (v/c) ratio is an indicator which reflects the performance of a road. A v/c ratio equals to or less than 1.0 means that a road has sufficient capacity to cope with the volume of vehicular traffic under consideration and the resultant traffic will flow smoothly. A v/c ratio above 1.0 indicates the onset of congestion; that above 1.2 indicates more serious congestion with traffic speeds deteriorating progressively with further increase in traffic.

that spans the east-west vehicle corridors providing uninterrupted north-south movement.

19. Grade-separated links such as the Status Square Corridor, Civic Corridor and Arts & Entertainment Corridor are proposed to cater for pedestrian flows anticipated along the major corridors. It will be supplemented by high capacity at-grade facilities across Road P2 and other transverse distributor roads catering for shorter distance trips and connections to ground level activities.

20. The proposed shoreline promenade and the pedestrian facilities linking it with the proposed development sites and the existing pedestrian network serve to create not only a highly accessible, high quality waterfront area but also enhanced modal interchange links that are vital to a successfully integrated transport system.

In-situ Redevelopment of Central Government Offices / Murray Building and Use of Kai Tak Site

In-situ Redevelopment of Central Government Offices (CGO) and Murray Building (MB)

When we announced the decision of the Executive Council in April 2002 to proceed with the development of the Tamar site, we highlighted its merits over in-situ redevelopment of the CGO and MB. Compared with the option of an in-situ redevelopment of the CGO and MB, the proposed development project at Tamar would allow at least four years of earlier completion. The Tamar project would provide a more reasonable solution to the office space shortage problems faced by the Government Secretariat and the LegCo and at the same time allow jobs to be created at the earliest opportunity for the construction sector. We have explained the programming differences to the LegCo Panel on Planning, Lands and Works.

Kai Tak site

2. There is a proposal from some Members to explore the former Kai Tak site option for development of the Government headquarters.

3. We have carefully considered the suggestion. The Government first announced the intention to reserve the Tamar site for development of the Government headquarters in January 1998 and proceeded with the planning and public consultation process afterwards to re-zone the Tamar site from "Commercial" to "Government, Institution or Community" and "Open Space" in 2000. We completed the feasibility study of the Tamar site and started preliminary ground works in preparation for the construction works of the Tamar development project by early 2003. If not for the SARS outbreak, the Tamar project should have been close to completion by now.

4. On the other hand, the Government commenced a comprehensive review of the Kai Tak development since July 2004. Two rounds of public engagement processes were conducted with the second one started in late-2005. Major development components in the Kai Tak Development include world-class cruise terminal, multi-purpose stadium, etc. A preliminary outline development plan for Kai Tak should be available for the next phase of public consultation in mid-2006, after which the Government is committed to entering into the statutory planning process to propose corresponding amendments to the relevant Outline Zoning Plans. Taking into account the time required for

detailed engineering and environmental impact assessment studies, the entire statutory planning process is expected to be completed in early 2008.

5. Given the above, the Government still considers Tamar the best site for Hong Kong's prime civic core comprising the Legislature, the Government headquarters and a public open space. The location is easily accessible to international and local visitors, as they call on the law-makers and senior officials. From Hong Kong's long-term development point of view, there is strategic advantage for the Legislature, the Government Secretariat and the Judiciary to be located in the same district and in close proximity to the financial centre in Central, which is the hub for Hong Kong's economic activities.

6. Given the significant amount of time already expended on the feasibility studies and the broad directions agreed on the long-term use of the Tamar and Kai Tak sites, we do not propose to alter the agreed plans at the expense of further delays to the two important development programmes on both sides of the harbour.

7. Overall, the Government recognises that the Kai Tak site presents a very precious waterfront site of appreciable size. The Government is committed to developing it into an economically vibrant and lively area.

Enclosure 10 to PWSC(2006-07)15

63KA Tamar Development Project
Breakdown of the estimate for consultants' fees

Consultants' staff cost		Estimated man-months	Average MPS* salary point	Multiplier Note 1	Estimated fee ($million)
(a) Quantity surveying services **Note 2**	Professional	-	-	-	8.8
	Technical	-	-	-	4.2
				Sub-total	13.0
(b) Electrical, IT, telecommunication and mechanical engineering services **Note 3**	Professional	152.1	38	2.0	16.5
	Technical	236.0	14	2.0	8.5
				Sub-total	25.0
(c) Structural engineering and geotechnical services **Note 3**	Professional	59.9	38	2.0	6.5
	Technical	88.8	14	2.0	3.2
				Sub-total	9.7
(d) Environmental, landscape and risk management services **Note 3**	Professional	80.2	38	2.0	8.7
	Technical	91.6	14	2.0	3.3
				Sub-total	12.0
*MPS = Master Pay Scale				Total	59.7

Note 1 A multiplier of 2.0 is applied to the average MPS point to estimate the full staff costs including the consultants' overheads and profit, as the staff will be employed in the consultants' offices. (At 1 January 2005, MPS point 38 is $54,255 per month and MPS point 14 is $18,010 per month.)

Note 2 The consultant's staff cost for quantity surveying services is calculated in accordance with the existing consultancy agreement for the provision of quantity surveying services for **63KA**. The assignment will only be executed subject to Finance Committee's approval to upgrade **63KA** to Category A.

Note 3 We will only know the actual man-months and actual fees after we have selected the consultants through the usual competitive bidding system.