

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Support – Commerce and industry

3GA – Science Park at Pak Shek Kok – phase 1c

Members are invited to recommend to Finance Committee the upgrading of **3GA** to Category A at an estimated cost of \$1,712.7 million in money-of-the-day prices for phase 1c of the Science Park development.

PROBLEM

We need to construct the remaining part of Science Park phase 1 (namely phase 1c) to meet strong market demand for lettable space therein.

PROPOSAL

2. The Director of Architectural Services (D Arch S), with the support of the Secretary for Commerce and Industry, proposes to upgrade **3GA** to Category A at an estimated cost of \$1,712.7 million in money-of-the-day (MOD) prices to carry out works for Science Park phase 1c.

PROJECT SCOPE AND NATURE

3. The scope of works for Science Park phase 1c, with a total gross floor area (GFA) of 61 770 square metres, comprises –

/(a)

	GFA (m²)	% of Total GFA
(a) a multi-tenant/multi-purpose complex for –		
(i) lease to small size tenants; and	16 410	26.6
(ii) ancillary facilities such as a café and meeting rooms to support tenants;	870	1.4
(b) a multi-tenanted building for lease to medium size tenant(s);	18 090	29.3
(c) two buildings for lease to large anchor tenant(s);	26 400	42.7
(d) some 290 carparking spaces;	-	-
(e) a landscaped area with amenities and outdoor space of about 11 650 square metres; and	-	-
(f) associated external works such as drainage and services tunnels.	-	-
Total	61 770	100.0

4. D Arch S plans to start the phase 1c works in September 2001 for completion by early 2004 to synchronise with the marketing schedules of the Provisional Hong Kong Science Park Company Limited¹ (the Company). The site plan for phase 1 is at Enclosure 1.

/JUSTIFICATION

¹ The Provisional Hong Kong Science Park Company Limited was set up as an interim body to plan and manage the Science Park project. The Government is now in the process of merging this company with the Hong Kong Industrial Estates Corporation and the Hong Kong Industrial Technology Centre Corporation by way of legislation. Relevant Bill was recently passed by Legislative Council. A new statutory body, to be called the Hong Kong Science and Technology Parks Corporation, will be formally established in early May.

JUSTIFICATION

5. Hong Kong needs to become a knowledge and technology-based economy in order to maintain and enhance our global competitiveness. Various studies such as the Hong Kong Science Park Study Stage One and Stage Two have established that Hong Kong needs to develop a Science Park as part of the essential infrastructure to help Hong Kong industries move up the technological ladder and develop technology-intensive and higher value-added business activities.

6. Since the launch of the Science Park in November 1999, we have been receiving very encouraging and positive responses from both local and overseas technology-based companies. As at mid-March 2001, there were 39 applications for admission. Discounting two applications which have already been rejected, the total demand for space as at mid-March 2001 amounts to 120 600 square metres of GFA. On the other hand, the total space available for lease in the entire phase 1 (including phase 1c) is only 109 400 square metres. We expect demand will further increase as the Company has started a series of marketing efforts both locally and overseas and it is likely to receive new applications in due course. Separately, the Company is now engaging in serious negotiations with a number of multi-national corporations, which may again increase the demand for space if the negotiations bear fruit. Hence, there is an urgency to start the construction of phase 1c as soon as possible to address the forecast demand.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost for phase 1c to be \$1,712.7 million, in MOD prices (see paragraph 8 below), made up as follows –

/(a)

	\$ million	
(a) Piling	130.2	
(b) Building	731.5	
(c) Building services	437.2	
(d) Drainage and external works	53.2	
(e) Consultants' fees –	16.5	
(i) contract administration	4.1	
(ii) specialist consultants	12.4	
(f) Furniture and equipment	50.0	
(g) Contingencies	135.2	
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	Sub-total	1,553.8 (in September 2000 prices)
(h) Provision for price adjustment	158.9	
	<hr/>	
	Total	1,712.7 (in MOD prices)
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The construction floor area of this project is about 89 300 square metres. The construction unit cost, represented by building and building services cost, is \$13,087 per square metre in September 2000 prices. The construction unit cost is comparable to those of similar projects built by the Architectural Services Department. A breakdown by man-months of the estimate for consultants' fees is at Enclosure 2.

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

/2001 - 02

Year	\$ million (Sept 2000)	Price adjustment factor	\$ million (MOD)
2001 – 02	34.4	1.02550	35.3
2002 – 03	266.6	1.05627	281.6
2003 – 04	591.4	1.08795	643.4
2004 – 05	392.5	1.12059	439.8
2005 – 06	205.3	1.15421	237.0
2006 – 07	63.6	1.18884	75.6
	1,553.8		1,712.7

9. We derived the MOD prices on the basis of Government's latest forecast of trend labour and construction prices for the period of 2001 to 2007. We will tender the piling and superstructure works under separate fixed-price lump-sum contracts as the contract period for each contract will be less than 21 months and we can clearly define the scope of works in advance, leaving little room for uncertainty.

PUBLIC CONSULTATION

10. We briefed the Legislative Council Panel on Commerce and Industry on 9 April 2001. Members were supportive of the proposal.

ENVIRONMENTAL IMPLICATIONS

11. In May 1998, Director of Territory Development (DTD) completed an Environmental Impact Assessment (EIA) report as an integral part of the Pak Shek Kok Development Feasibility Study, which included the Science Park. The Advisory Council on the Environment endorsed the findings and recommendations of EIA report. We will implement the mitigation measures, environmental monitoring and auditing requirements in the relevant works contracts according to the recommendation of the EIA reports. Mitigation measures during the construction stage include the use of quiet plant, on-site movable noise barriers, limits on the amount of plant and equipment operating concurrently for noisy construction activities, as well as provision of wheel washing facilities and regular watering of the site.

12. Ways of minimizing the generation of construction and demolition (C&D) materials were considered at the planning and design stage. We will reduce the public fill to be generated from the project by about 20% by adopting a semi-basement design for underground parking. We will require the contractor to submit a waste management plan (WMP) to D Arch S for approval, with appropriate mitigation measures including allocation of an area for waste segregation. We will ensure that the day-to-day operations on site comply with the approved WMP. We will also require the contractor to implement necessary measures to minimise the generation of C&D materials. Where such materials are produced, we will try to reuse and recycle them. If this is not possible, C&D materials will be disposed of at designated public filling facilities and/or in landfills through a trip-ticket system. The reuse, recycling and disposal of C&D materials will be properly recorded for monitoring purposes. We estimate that some 148 000 cubic metres of C&D materials will be generated by this project. Of these, about 20 000 cubic metres (13.5%) will be reused on site, about 110 000 cubic metres of inert C&D materials (74.3%) will be reused as fill in public filling areas², and about 18 000 cubic metres of C&D waste (12.2%) will be disposed of at landfills.

LAND ACQUISITION

13. The land for Science Park phase 1 was granted to the Company on 30 December 2000 by private treaty at nominal land premium.

BACKGROUND INFORMATION

14. The Science Park will occupy a total area of 22 hectares and will be developed in three phases. The master layout plan at Enclosure 3 was approved by the Board of Directors of the Company. Given the strong market demand, we plan to expedite the development with a view to completing all three phases in nine years instead of 15 years. When fully developed, the site will provide a total GFA of about 330 000 square metres of floor space for lease to technology-based companies to carry out their research and development (R&D) activities in a fully landscaped park-like setting.

15. Reclamation for different phases of the Science Park project is on-going. The Science Park will be a low density development with an average plot ratio of 2.5 to create a pleasant environment in line with the international norm for such project in order to attract local as well as overseas high-tech firms and researchers. The plot ratio has been approved by the Town Planning Board.

/16.

² A public filling area is a designated part of a development project that accepts fill for reclamation purposes. Disposal of public fill in a public filling area requires a licence issued by the Director of Civil Engineering.

16. The full scope of phase 1 development will occupy an area of eight hectares, and will provide –

		GFA (m²)	% of Total GFA
(a)	(i) lettable space for lease to technology-based companies to carry out R&D activities;	109 400	91.2
	(ii) administrative (i.e. the Company's administration office) and ancillary facilities such as restaurants, conference rooms and exhibition space to support tenants; and	6 600	5.5
	(iii) residential accommodation for lease to visiting scientists and researchers;	4 000	3.3
(b)	carparking facilities for about 1 000 cars ³ ;	-	-
(c)	a landscaped area and roads of about 53 800 square metres; and	-	-
(d)	associated external works such as drainage and services tunnels.	-	-
	Total	120 000	100.0

Phase 1 of the Science Park is being developed as a public works project. Upon completion of works, all the buildings, infrastructure and other physical facilities in phase 1 will be handed over to the Company for possession, management and maintenance.

/17.

³ In the PWSC paper (1999-2000)77 proposing the upgrading of part of the then 3GA to Category A as 5GA, we planned for a total of 800 carparking spaces for the entire phase 1 and stated the need to review whether additional carparking spaces would be required as we proceed. Feedback from potential tenants has confirmed the need for more carparking spaces to meet their operational needs. The total carparking spaces for phase 1 is therefore revised to 1 000. The multi-storey carpark building and the basement carparking in phases 1a and 1b buildings will provide 710 carparking spaces. The remaining 290 carparking spaces will be provided in phase 1c in the form of open or basement carparking.

17. The construction works for phase 1 are sub-divided into three stages, namely phase 1a, 1b and 1c. We upgraded **3GA** to Category B in January 1998.

Phase 1a and 1b

18. On 27 February 1998, the Finance Committee approved the upgrading of part of the then **3GA** to Category A as **4GA** for carrying out site investigations and the engagement of consultancy services for the master layout plan and phase 1a development of the Science Park, at an estimated cost of \$54.8 million in MOD prices. The necessary site investigation, the master layout plan design and the detailed design for phase 1a have been completed. D Arch S has also deployed in-house resources to complete the design for phase 1b.

19. On 21 January 2000, Finance Committee approved the upgrading of part of the then **3GA** to Category A as **5GA** for carrying out the works for Science Park phases 1a and 1b at an estimated cost of \$1,982.7 million in MOD prices. The scope of **5GA** includes –

		GFA (m ²)	% of Total GFA
(a)	(i) lettable space for lease to technology-based companies to carry out R&D activities;	48 500	83.3
	(ii) administrative and ancillary facilities to support tenants; and	5 730	9.8
	(iii) residential accommodation for lease to visiting scientists and researchers;	4 000	6.9
(b)	carparking facilities for about 710 cars ³ ;	-	-
(c)	roads and minimum landscape cover for about 53 800 square metres, and a landscaped area inclusive of amenities and outdoor spaces of about 11 000 square metres; and	-	-
(d)	associated external works such as drainage and services tunnels.	-	-
	Total	58 230	100.0

20. Construction of phase 1a is in active progress. This phase is targeted to open by the end of 2001. The construction of phase 1b has been advanced and is now targeted for completion in the last quarter of 2002 instead of 2003.

Phase 1c

21. D Arch S, using in-house resources, has completed the detailed design for phase 1c and is now preparing the tender documents. We plan to tender the first contract in June 2001.

22. We estimate that the proposed works will create some 1 840 jobs with a total of 30 350 man-months comprising 20 professional staff, 75 technical staff and 1 745 labourers during the construction period.

Commerce and Industry Bureau
April 2001

Enclosure 2 to PWSC(2001-02)18

3GA – Science Park at Pak Shek Kok – phase 1c

Breakdown of estimates for consultants' fees

Consultants' staff cost		Estimated man-months	Average MPS* salary point	Multiplier factor	Estimated fee (\$ million)
(a) Contract administration	Professional	21.0	38	2.4	2.9
	Technical	26.2	14	2.4	1.2
				Sub-total	4.1
(b) Specialist consultants					
(i) Environmental	Professional	3.6	38	2.4	0.5
	Technical	8.7	14	2.4	0.4
(ii) Traffic	Professional	2.9	38	2.4	0.4
	Technical	4.4	14	2.4	0.2
(iii) Façade designer	Professional	3.6	38	2.4	0.5
	Technical	8.7	14	2.4	0.4
(iv) Information technology, audio-visual equipment, artwork advice and design, etc.	Professional	57.9	38	2.4	8.0
	Technical	43.7	14	2.4	2.0
				Sub-total	12.4
				Total	16.5

* MPS = Master Pay Scale

Notes

1. A multiplier factor of 2.4 is applied to the average MPS point to arrive at the full staff costs for the staff employed by the consultants including the consultant's overheads and profit. (At 1.4.2000, MPS pt. 38 = \$57,525 p.m. and MPS pt. 14 = \$19,055 p.m.).
2. The figures given above are based on estimates prepared by the Director of Architectural Services. We will only know the actual man-months and actual fees when we have selected the consultants through the usual competitive bidding system.

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香港生物科技研究院
H.K. INSTITUTE OF BIOTECHNOLOGY

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GOVERNMENT INSTITUTION OR COMMUNITY

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TOLO HIGHWAY
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TO TAIPO
往大埔

OPEN SPACE
休憩用地

OPEN SPACE
休憩用地

北

WATERFRONT PROMENADE
海濱長堤

PHASE 1
第一期

PHASE 2
第二期

PHASE 3
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CORPORATE ZONE 企業區

TOLO HARBOR

位置圖

LOCATION PLAN SCALE (比例) 1:15000

3GA

SCIENCE PARK AT PAK SHEK KOK - MASTER LAYOUT PLAN (MLP)

ARCHITECTURAL SERVICES DEPARTMENT 建築署

自石角科學園 - 總綱發展藍圖