

## **ITEM FOR FINANCE COMMITTEE**

**CAPITAL WORKS RESERVE FUND  
HEAD 710 - COMPUTERISATION  
Buildings Department  
New Subhead “Building Condition Information System”**

Members are invited to approve a new commitment of \$19,716,000 for implementing a Building Condition Information System in the Buildings Department.

### **PROBLEM**

The absence of an information system in the Buildings Department (BD) hinders the effective monitoring of existing private buildings in Hong Kong to ensure that they meet the required statutory standards of safety, health, sanitation and environmental hygiene.

### **PROPOSAL**

2. The Director of Buildings (DB), with the support of the Secretary for Planning and Lands and the Director of Information Technology Services, proposes to implement a computerised Building Condition Information System in BD with a commitment of \$19,716,000.

### **JUSTIFICATION**

3. Fifteen Units in the Control and Enforcement Division and six Sections in the Specialist Division of BD are responsible for ensuring that existing private buildings meet the required standards. At present, these units and sections carry out most of their operations manually, and maintain their own case files and independent filing systems. The lack of readily-available, comprehensive information on buildings gives rise to difficulties in sharing information between different units and sections and in compiling statistics. It can also lead to

/inconsistency .....

inconsistency or duplication of data, and unnecessary duplication in the checking of ownership of buildings from the Land Registry records. In addition, the preparation of statutory and works orders requires inputs from officers of different ranks, which entails laborious and time-consuming file movements. A comprehensive information system would help overcome these difficulties and promote greater efficiency in monitoring the condition of private buildings in Hong Kong.

### **Proposed Building Condition Information System**

4. To remedy these deficiencies, DB proposes to develop a computerised information system on the condition of all existing private buildings in Hong Kong. The proposed system will -

- (a) provide an effective means of recording, processing and retrieving details of complaints, referrals, planned surveys, statutory orders, works orders, consultancy assignments and licence application referrals. The system will facilitate co-ordination between the different divisions within BD tasked to deal with different aspects of buildings;
- (b) provide timely and up-to-date information on the status of complaints, statutory orders, licence application referrals etc. for internal monitoring and handling of professional and public enquiries;
- (c) provide searches on the basic data of individual private buildings and maintain records of the unauthorised buildings works (UBWs) reported to and inspected by BD;
- (d) generate standard letters and orders to complainants and building owners; and
- (e) provide enquiries and statistical reporting facilities for operational and planning purposes.

### **Benefits of the proposed Building Condition Information System**

5. The proposed Building Condition Information System will bring about the following benefits -

- (a) ***Reduce the lead time for issuing removal and repair orders***

BD issues about 9 000 removal and repair orders each year. The existing practice of serving an order takes an average of two months after the receipt of ownership details from the

Land Registry. The proposed system will facilitate the order preparation and authorisation process and reduce the lead time for issuing orders by up to 14 days in general.

(b) ***Retrieve information effectively***

A sub-standard building may be identified during an emergency or an inspection. In order to ensure public safety, details of other buildings under the responsibility of the same Authorised Person, Registered Structural Engineer or Registered Contractor are required urgently for further investigation. Under the present manual system, the retrieval of information may occasionally take more than one month. The proposed system will enable information to be retrieved instantaneously.

(c) ***Improve public enquiry services***

At present, it takes about one week to respond to enquiries concerning UBWs of which BD has carried out inspections, lot descriptions, dates of occupation permits, presence of unauthorised structures, statutory orders etc. The proposed system will allow for almost instantaneous response to such enquiries.

(d) ***Improve inter-departmental and internal communication and co-ordination among units and sections***

The proposed system will assist officers in different units and sections to identify target buildings for joint operation with relevant departments to improve fire and building safety.

(e) ***Provide timely management information***

Government departments and the media make frequent enquiries about statistics and information relating to UBWs, dangerous buildings, slopes and advertisement signboards, particularly after occurrence of major incidents. The proposed system will generate the required information and statistics in minutes instead of days or weeks when compared to the existing manual system. Furthermore, the readily available information will greatly facilitate the management in making policy decisions and enforcement actions related to building safety.

(f) *Improve data security and integrity*

The proposed system will eliminate data redundancy and inconsistency and provide more reliable data, thus enhancing office efficiency.

**Cost and Benefit Analysis**

6. Upon implementation of the proposed system, we expect to achieve total annual savings of \$8,979,000. This comprises -

- (a) **realisable savings** of \$2,052,000 per annum. This will be achieved through an anticipated reduction in staff costs of posts of one Assistant Clerical Officer, one Clerical Assistant and one Typist, totalling \$800,000; and a reduction in fees payable to the Land Registry of about \$1,252,000 as a result of removing duplication in ownership checking. These will begin to be realisable upon the live run of the system in 2001. As the proposed system will gradually establish and maintain an ownership database, this will incrementally reduce the ownership checking fees payable to the Land Registry, as well as eliminating clerical work in maintaining and filing manual records; and
- (b) **notional savings** of \$6,927,000 per annum. These savings cannot be realised because they comprise a small fraction each of 300 posts in various grades and divisions. The savings will be redeployed to absorb increases in workload or to effect improvements in services.

Encl. 7. A detailed cost and benefit analysis is at the Enclosure. We anticipate that the system will break even in 2005-06, i.e. four years after full commissioning.

**FINANCIAL IMPLICATIONS****Non-recurrent Expenditure**

8. The estimated total non-recurrent cost of the proposed system is \$25,358,000. This comprises \$19,716,000 for the acquisition of computer hardware and software and related services for which we are seeking Members' approval of a new commitment, and \$5,642,000 for in-house development staff to be absorbed by BD and Information Technology Services Department (ITSD). A breakdown is as follows -

/Non-recurrent .....

	2000-01 \$'000	2001-02 \$'000	2002-03 \$'000	Total \$'000
<b>Non-recurrent expenditure for which we are seeking a commitment</b>				
(a) Hardware and software	0	7,349	0	7,349
(b) Site preparation	0	200	0	200
(c) Implementation services	454	6,749	956	8,159
(d) Data conversion	219	1,534	0	1,753
(e) Communication lines	0	59	0	59
(f) Training	0	388	0	388
(g) Consumables	0	15	0	15
(h) Contingency	68	1,629	96	1,793
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<b>Sub-total</b>	<b>741</b>	<b>17,923</b>	<b>1,052</b>	<b>19,716</b>
<b>Other non-recurrent costs</b>				
(i) BD staff costs	3,276	2,085	0	5,361
(j) ITSD staff costs	172	109	0	281
	<hr/>	<hr/>	<hr/>	<hr/>
<b>Sub-total</b>	<b>3,448</b>	<b>2,194</b>	<b>0</b>	<b>5,642</b>
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<b>Total</b>	<b>4,189</b>	<b>20,117</b>	<b>1,052</b>	<b>25,358</b>

9. As regards paragraph 8(a), the expenditure of \$7,349,000 is for acquisition of computer hardware, software and networking equipment, including database servers, file servers, workstations, peripherals and data communication equipment.

10. As regards paragraph 8(b), the expenditure of \$200,000 is for site preparation work, including the installation of conduit facilities, data ports and power points for computer equipment.

11. As regards paragraph 8(c), the expenditure of \$8,159,000 is for acquisition of services for system analysis and design, application development, system implementation, testing and acceptance testing, and project management on an outsourced basis.

12. As regards paragraph 8(d), the expenditure of \$1,753,000 is for the hiring of services to convert data relating to 150 000 case files pertaining to particulars of buildings (e.g. address, file reference, slope information, occupation permit, etc.) into digital records for further processing.

13. As regards paragraph 8(e), the expenditure of \$59,000 is for setting up communication lines at the headquarters and outstation sub-offices of BD.

14. As regards paragraph 8(f), the expenditure of \$388,000 is for providing training services to BD staff for using and administering the proposed system.

15. As regards paragraph 8(g), the expenditure of \$15,000 is for acquisition of initial consumables and miscellaneous items required during implementation.

16. As regards paragraph 8(h), the expenditure of \$1,793,000 represents a 10% contingency on the cost items set out in paragraphs 8(a) to 8(g).

17. As regards paragraph 8(i), the expenditure of \$5,361,000 represents BD's staff costs for fine-tuning system requirements, overseeing the system implementation and performing user acceptance tests. This comprises the efforts of two man-months of Chief Building Surveyor, 16 man-months of Senior Building Surveyor/Senior Structural Engineer, 14 man-months of Building Surveyor/ Structural Engineer, one man-month of Senior Survey Officer/Senior Technical Officer and 29 man-months of Survey Officer/Technical Officer. BD will absorb these staffing requirements by internal redeployment.

18. As regards paragraph 8(j), the expenditure of \$281,000 represents the staff costs of two man-months of Senior Systems Manager required by ITSD for providing technical advice to BD during tendering, system development and system implementation. ITSD will meet the staffing requirements from within its existing resources.

**Recurrent Expenditure**

19. The estimated recurrent expenditure for maintaining and supporting the proposed system after implementation is as follows -

	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>
	<b>\$'000</b>	<b>\$'000</b>	<b>and</b>
			<b>annually</b>
			<b>thereafter</b>
			<b>\$'000</b>
<b>Recurrent expenditure</b>			
(a) Hardware and software maintenance	0	626	626
(b) Rental of communication lines	0	32	76
(c) Consumables	0	42	100
(d) Operation support services	595	931	1,323
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<b>Total</b>	<b>595</b>	<b>1,631</b>	<b>2,125</b>
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20. As regards paragraph 19(a), the annual expenditure of \$626,000 is for maintenance of computer hardware and software.

21. As regards paragraph 19(b), the annual expenditure of \$76,000 is for payment of rental charges for communication lines connecting the headquarters and outstation sub-offices of BD.

22. As regards paragraph 19(c), the annual expenditure of \$100,000 is for acquisition of consumables such as toner and paper for laser printers, and disks and tapes for backup purpose.

23. As regards paragraph 19(d), the annual expenditure of \$1,323,000 is for contract services/staff to provide on-going system support and maintenance services in BD.

**/Implementation .....**

### Implementation Plan

24. We estimate that implementation of the system will be completed by November 2001. The implementation plan is as follows -

	<b>Activity</b>	<b>Target completion date</b>
(a)	Tendering	September 2000
(b)	Team formation	October 2000
(c)	System analysis and design	February 2001
(d)	Implementation	August 2001
(e)	Data conversion	September 2001
(f)	Building Condition Information System live run	November 2001

### BACKGROUND INFORMATION

25. BD's primary mission is to ensure statutory standards of safety, health, sanitation and environmental hygiene are appropriate and met in respect of all buildings and building works in the private sector. The absence of a computerised information system in BD hinders the effective monitoring of existing private buildings in Hong Kong to ensure that they meet these standards. The Information System will facilitate proper inspection and maintenance of buildings and so enhance their overall safety.

26. We informed the Planning, Lands and Works Panel of the Legislative Council of the proposed Building Condition Information System through circulation of an information paper on 14 April 2000.

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Planning and Lands Bureau  
April 2000



**Cost and Benefit Analysis of Implementation of  
the Proposed Building Condition Information System in Buildings Department  
(at 1999-2000 price level)**

	Cashflow (HK\$'000)								
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Total
<b>COST</b>									
<b>Non-recurrent</b>									
Expenditure	741	17,923	1,052	-	-	-	-	-	19,716
Staff cost	3,448	2,194	-	-	-	-	-	-	5,642
Sub-total	4,189	20,117	1,052	-	-	-	-	-	25,358
<b>Recurrent</b>									
Expenditure	595	1,631	2,125	2,125	2,125	2,125	2,125	2,125	14,976
Sub-total	595	1,631	2,125	2,125	2,125	2,125	2,125	2,125	14,976
<b>Total Cost</b>	4,784	21,748	3,177	2,125	2,125	2,125	2,125	2,125	40,334
<b>BENEFITS</b>									
Realisable savings	0	333	1,113	1,426	1,739	2,052	2,052	2,052	10,767
Notional savings	0	2,886	6,927	6,927	6,927	6,927	6,927	6,927	44,448
<b>Total Benefits</b>	0	3,219	8,040	8,353	8,666	8,979	8,979	8,979	55,215
<b>Net benefits</b>	(4,784)	(18,529)	4,863	6,228	6,541	6,854	6,854	6,854	14,881
<b>Cumulative benefits</b>	<b>(4,784)</b>	<b>(23,313)</b>	<b>(18,450)</b>	<b>(12,222)</b>	<b>(5,681)</b>	<b>1,173</b>	<b>8,027</b>	<b>14,881</b>	