

**Memorandum for the Subsidised Housing Committee of  
the Hong Kong Housing Authority**

**Review of the Total Maintenance Scheme Cycle**

**PURPOSE**

This paper informs Members the changes in the inspection arrangements of the Total Maintenance Scheme (TMS) for the public rental housing (PRH) estates.

**RECOMMENDATIONS**

2. Members are recommended to note that the following approaches will be adopted in the implementation of the TMS cycle:
  - (a) As far as the inspection arrangements are concerned, thorough inspection is conducted:
    - i. every 10 years for estates aged between 10 to 30; and
    - ii. every 5 years for estates aged 30 above.
  - (b) For estates with identified redevelopment potential:
    - i. thorough inspection is conducted every 5 years for estates not to be redeveloped within 15 years;
    - ii. for estates to be redeveloped within 15 years, thorough inspection is conducted **on block basis** when the block has a remaining life for not shorter than 5 years upon completion of the TMS.

**BACKGROUND**

3. The Housing Authority (HA) endorsed (vide Paper no. HA 40/2005) the TMS in October 2005, which among other things, started out a

5 year programme in early 2006 to proactively inspect the in-flat conditions and comprehensively repair PRH flats with a view to maximizing the performance and economic life of HA's assets while enhancing the quality of the living environment for our tenants. To implement the Scheme, In-flat Inspection Ambassadors (IIAs) would liaise with tenants to inspect the flats, record the in-flat condition, educate tenants on home caring and maintenance issues and arrange repair works. Each IIA would be accompanied by a works co-ordinator and a building maintenance worker (BMW) from the contractor's side who would arrange minor touch-up on the spots as required. The standard of services set up under the TMS was well received by tenants.

4. Given the positive responses to the Scheme and in line with the Government mandatory inspection schemes <sup>Note 1</sup>, the TMS was developed into a regular programme for estates aged 10 and above with thorough and general inspection <sup>Note 2</sup> conducted according to the age profile of respective estate (vide Paper no. SHC 59/2008). Following the completion of the first TMS cycle in early 2011, the second TMS cycle of the TMS which was subsequently launched in the same year is now entering into the fourth year.

5. Drawing on the success of the TMS and aiming at enhancing our maintenance services, we started rolling out 'Responsive In-flat Maintenance Services' (RIMS) progressively in 2008 to our PRH estates for carrying out the responsive in-flat repair works (vide Paper no. SHC 59/2008). Modeled on the TMS dedicated in-flat technical teams mirroring IIA and BMW have been set up under RIMS to respond to tenants' daily repair request promptly. In 2011, RIMS was promulgated to all 194 PRH estates; while in 2014, all 210 PRH estates have RIMS service.

6. Since the official launch of the Mandatory Window Inspection Scheme (MWIS) on 30 June 2012 by the Government, the MWIS of the selected PRH estates would also be implemented during the in-flat inspection concurrently under the TMS.

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**Note 1** Under the Buildings (Amendment) Bill, mandatory inspection schemes include 'Mandatory Building Inspection Scheme' and 'Mandatory Window Inspection Scheme'.

**Note 2** **Thorough Inspection** is conducted every 10 years for estates aged 20 and above for comprehensive repair of building elements on ceiling, wall, floor, window, drainage, plumbing, door, gate, electrical installation, CABD, security system and gas installation which may affect the in-flat, safety and hygiene conditions; while **General Inspection** is conducted every 5 years for estates aged 10 and above focusing on repair of concrete spalling, water seepage, pipework leak/blockage, window repair and electrical repair.

## PRESENT POSITION OF THE TMS

7. The first 5 years cycle of the TMS was successfully completed in 2011 in 177 estates, involving some 605,000 PRH flats, with an average access rate of around 77%. About 344,300 works orders had been issued and completed satisfactorily.

8. As at March 2014, 97 estates were successfully launched in the second TMS cycle <sup>Note 3</sup>. The inspection and repair services have been satisfactorily completed in 65 estates involving about 223,800 flats and 93,000 works orders, with an average annual expenditure of \$160M on repair works. The overall access rate for the second TMS cycle up till now is about 75.35%. In the latest customer satisfaction survey conducted by the independent consultant, the overall satisfaction rate is about 80% while the dissatisfaction rate is 3.5%. Out of this 3.5%, 9.8% opined that there was no inspection/repair needs or time on inspection was too long.

### General Condition of Domestic Units

9. According to our inspection findings, the physical quality of our PRH estates has been greatly improved since the implementation of TMS. Data on four major repair items retrieved from estates completed both in the first and second TMS cycle reflects that the volume of repair works required (Table 1 refers) in the second TMS cycle has dropped significantly when compared with the first TMS cycle <sup>Note 4</sup>.

	Major Item	No. of Works Orders Issued		
		1 <sup>st</sup> Cycle	2 <sup>nd</sup> Cycle	Difference
1.	Concrete Spalling	70 290	43 220	27 070 (- 38.5%)
2.	Drainage	38 820	26 840	11 980 (- 30.9%)
3.	Water Seepage	27 580	7 140	20 440 (-74.1%)
4.	Door	9 990	6 500	3 490 (- 34.9%)

**Table 1: Situation on Works Orders Issuance for Major Repair Works**

**Note 3** The first TMS cycle for 177 estates was implemented from 2005/2006 to 2010/2011; while the second TMS cycle, covering 187 estates, has been implementing since 2011/2012. This year, 2014, is the fourth year of second TMS cycle.

**Note 4** Since the second TMS cycle is still in operation, repair data from 48 PRH estates, completed both in the first and second TMS cycle, are retrieved for analysis.

## **Tenants' Awareness on In-flat maintenance**

10. Other than providing proactive inspection and repair, one of the objectives of the TMS is to educate tenants on the importance of building maintenance during in-flat inspections so as to raise their awareness in reporting defects inside their flats for our timely repair, thus preventing minor maintenance problems developing into serious ones. We have achieved a great success in this end. According to the RIMS data, tenants' requests for in-flat maintenance increased by 35% from 2011 to 2013 <sup>Note 5</sup> despite the internal condition of domestic flats having greatly improved through implementation of the TMS. This reflects tenants' high consciousness and willingness in reporting the in-flat defects to us.

## **RIMS**

11. The implementation of RIMS has enabled us to provide timely repair to our housing stock. Due to its introduction, we are now able to complete the simple works request within 2 days. For more complicated cases which need to issue works orders to the contractors, our contractors can complete more than 70% of tenants' requests for repair works within 14 working days upon receipt of their report on in-flat defects. Similar to the TMS, RIMS is also welcomed by our tenants as reflected by the overall customer satisfaction rate for RIMS maintaining at about 80% from the independent customer satisfaction survey.

## **CHANGES TO THE TMS INSPECTION ARRANGEMENTS**

12. According to SHC (vide Paper no. SHC 59/2008), the frequency of general inspection is every 5 years for estates aged 10 and above while thorough inspection is every 10 years for estates aged 20 and above. Since a thorough inspection has to be conducted when the TMS is first launched to an individual estate and based on this rationale, for an estate with the TMS being implemented at the age of 10, it will have thorough inspection to be carried out at the age of 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 40<sup>th</sup> and so on while general inspection at 15<sup>th</sup>, 25<sup>th</sup>, 35<sup>th</sup>, 45<sup>th</sup> and so on.

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**Note 5** The number of works request to RIMS is 337,821 in 2011, 404,519 in 2012 and 455,448 in 2013, making an increment of 35%.

13. With the improved in-flat condition achieved through the implementation of the first TMS cycle and timely handling of defects under RIMS arising from high tenants' willingness in reporting defects, we may review the thorough and general inspection arrangements for individual estates under the TMS in order to utilize our limited resources effectively and to maintain the quality of in-flat maintenance service to tenants. We propose to adopt a different approach in the inspection arrangements of the TMS cycle taking into account the age profile of our housing stock and tenants' views from the latest customer satisfaction survey.

14. According to the consultancy study on our post-1992 rental domestic rental blocks, the building structure of these blocks is relatively good with an estimated total service life of about 100 years (vide Paper no. BC 39/2010). The said consultancy study was in line with the actual situation where the spending for estates aged between 10 to 20 was only 18% of the total expenditure in the first TMS cycle. It revealed that the maintenance needs were low for these "young" estates. Thus the existing TMS cycle with general and thorough inspections conducted in every alternate 5 years is considered to be too frequent for these relatively young estates in particular with RIMS being in place to handle the daily in-flat repairs. This is also reflected in the customer satisfaction survey that some tenants considered there were no inspection/repair needs for their flats. Therefore, for estates under this age group, we propose to carry out thorough inspections every 10 years but with no general inspections in between.

15. For estates aged between 20 to 30, although the building structure or building type is not the latest standard, our records showed that the quality of in-flat condition has been greatly enhanced through the first TMS cycle. Works orders issuance rate on major repair works such as concrete spalling, drainage etc., have dropped significantly in the second TMS cycle<sup>Note 6</sup> (Table 2 refers). Besides, our analysis also revealed that 25.3% and 29.8% of flats<sup>Note 7</sup> in the estates of this age group received the repair works service under RIMS in 2012 and 2013 respectively. An improved in-flat condition achieved through the first TMS cycle coupled with tenants' collaboration to approach to the RIMS for timely repair have allowed effective maintenance of these buildings. Thus, to utilize our resources more effectively and cause less disruption to our tenants in the implementation of the proactive cyclic inspection strategy of the

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**Note 6** Data is retrieved from 12 estates aged between 20 to 30 which are both completed in the first and second TMS cycle.

**Note 7** There are 148,229 flats in estates aged 20 to 30, the works orders issued by RIMS is 37,439 in 2012 and 44,123 in 2013.

TMS, we propose to maintain conducting the thorough inspections every 10 years for estates of this age group but discarding the general inspections in between. RIMS will be able to cater for the in-flat maintenance needs. In other words, an estate with the TMS being launched at the age of 10 will only have thorough inspections to be conducted at the age of 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup> and so on but no more general inspection.

		Works Orders Issuance Rate	
	Item	1 <sup>st</sup> Cycle	2 <sup>nd</sup> Cycle
1.	Concrete Spalling	31.2%	18.9%
2.	Drainage	23.9%	19.2%
3.	Water Seepage	16.6%	3.4%
4.	Door	14.0%	10.8%

**Table 2: Works Orders Issuance Rate for Estates Aged 20 to 30 Years under TMS**

16. For estates aged above 30, more maintenance needs are expected <sup>Note 8</sup>. The ‘Mandatory Building Inspection Scheme’ implemented by the Buildings Department also targets at private buildings aged above 30. According to the maintenance history database of the first TMS cycle, the repair cost per flat of this age group is about 113% <sup>Note 9</sup> higher than that for estates aged between 10 to 30, indicating the relatively high maintenance needs required for the former. It is advisable to inspect these flats more thoroughly and regularly to ensure building safety. As a result, instead of conducting the thorough and general inspections alternately every 5 years according to Paper no. SHC 59/2008, we propose to replace the general inspections with thorough inspections, i.e. all inspections every 5 years will be thorough for estates aged 30 and above.

17. In order to ensure smooth transition between the TMS cycles and let us maintain a relatively even distribution of workload, we will have a 6-month float time allowed in the formulation of the programme. For instance, an estate aged 30 above with the thorough inspection to be conducted every 5 years, but with its last TMS cycle completed in January 2013 will have the next TMS cycle started between June 2017 to June 2018 taking into the consideration of inspection durations, staff resources required, tenants’ feedback

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**Note 8** Works orders issuance rate for this age group on concrete spalling is 42.9% and drainage is 25.8%.

**Note 9** According to the data in first TMS cycle, the average repair cost/flat for ‘estates aged above 30’ and ‘estates aged between 10 to 30’ is \$1,646 and \$772 respectively.

and the need of synchronization of major maintenance and improvement programmes being planned over the period.

### **Implementation of TMS to Estates with Identified Redevelopment Potential**

18. There are 22 non-divested aged PRH estates identified with the redevelopment potential under the 'Redevelopment Potential Review' (vide Paper no. HA 6/2014). Nonetheless, from structural safety and economic perspective, there is no particular need to redevelop these estates at this moment. As it will take time to identify available rehousing resources, liaise with the relevant government departments and conduct detailed technical studies for the redevelopment of individual estates to proceed, redevelopment of these estates will be launched progressively with 3 years notice to tenants prior to the redevelopment. Therefore, from a sustainability perspective, we will continue to provide maintenance services to these estates until redevelopment of these estates is put in place. As such, for estates which will not be developed within 15 years, we propose to continue conducting the thorough inspection every 5 years as recommended in paragraph 16 above to enhance sustainability of the buildings.

19. In view of the objective of TMS is to enhance the building performance and extend their economic life, a building with limited remaining life may not warrant implementation of the TMS in terms of cost-effectiveness. Therefore, these 22 non-divested aged PRH estates which will be redeveloped within 15 years, we propose to execute the 5 years TMS cycle as recommended in paragraph 16 above **on a block basis** when the block has a remaining life of not shorter than 5 years upon completion of the TMS.

### **WAY FORWARD**

20. Proven as an important and valuable initiative for improving the quality of living on PRH estates, the life-cycle maintenance strategy adopted by the TMS achieves to keep our housing stock economically, socially and environmentally stable. Therefore, we will definitely continue the implementation of TMS in our estates as stipulated under Paper no. SHC 59/2008. However, taking into account of the success gained through the RIMS and with due consideration the age and condition of buildings while aiming at reducing wasteful consumption of resources and disturbance to tenants, we consider that the proposed inspection arrangements with thorough inspection every 5 years for estates over 30 years and every 10 years for estates aged 10 to 30 is the most appropriate operation mode to suit the actual situation

while maintaining the quality of our maintenance services provided under the TMS.

21. Nevertheless, to safeguard a proactive thorough in-flat inspection will be done in every cycle to each individual flat, in particular for estates aged 10 to 30 where thorough inspection will be conducted every 10 years, special arrangements will be made to re-visit those flats which are inaccessible for inspection after 3 attempts in that particular cycle within the next 5 years despite extra resources are required.

## **FINANCIAL AND STAFF IMPLICATIONS**

22. The maintenance expenditure for the TMS in adopting the proposed inspection arrangements for the TMS as detailed in paragraph 12-17 for 2014/15 & 2015/16 will be considered in the current budget exercise and the tentative savings for 2014/15 & 2015/16 will be redeployed to other maintenance works programmes. For the expenditure in the coming years, appropriate funding for the operation of the TMS under the new arrangements of inspection will be sought in future budget exercises.

23. There should be some reduction to the existing staff establishment after adopting the new arrangements of inspection for the operation of the TMS in the coming years. However, it can be seen that extra workforce will be involved to handle the workload generated from the need of re-visiting all those inaccessible flats. As the same time, we further find that additional staff requirements are needed to meet the deficit of staff resources in coping with the increasing workload arising from the new initiatives including enhancement of laundry racks, large scale toilet conversion works at Po Tin Estate and Tin Yan Estate. The said reduction is therefore offset by all such additional workforce required resulting in no saving of overall staff resources.

## **PUBLIC REACTION/PUBLICITY**

24. The TMS is well received by the LegCo and tenants. It is expected that the new inspection mode will be welcomed in view of minimized disturbance to tenants of relatively young estates and delivery of a better maintenance services to tenants of aged estates. The LegCo Panel on Housing was informed on 3 June 2014 about our proposal of reviewing the TMS cycle and no objection was raised by the Panel Members. The new operation mode of the TMS cycle will be widely publicized in the EMAC newsletter.

## INFORMATION

25. This paper is issued for Members' information.

Ms Cindy CHAN  
Secretary, Subsidised Housing Committee  
Tel. No.: 2761 5033  
Fax No.: 2761 0019

File Ref. : HD3-4/KC-TMS 1-55/2/19(C)  
(Estate Management Division)  
Date of Issue : 1 December 2014