

## **Legislative Council Panel on Housing**

### **Report on the findings of the Comprehensive Structural Investigations on Tung Tau Estate Block 22 and Fuk Loi Estate**

#### **Purpose**

This paper informs Members of the outcome of the comprehensive structural investigations on Tung Tau Estate Block 22 and Fuk Loi Estate and the recommended demolition and improvement works.

#### **Background**

2. In September 2005, the Housing Department launched a Comprehensive Structural Investigation Programme, covering ten public rental housing estates aged about 40 years or more. The objectives were to ascertain whether these aged housing blocks were structurally safe and whether it would be more cost-effective to keep these buildings or to demolish them. The investigation would also identify the extent and costs of the repair/strengthening works required to sustain these buildings for at least 15 years. The investigation is thorough and comprehensive, covering desktop studies on the repair history and findings of previous assessments, site surveys, inspections, sampling and testing. On the basis of the findings, technical assessments of the concrete strength and extent of steel reinforcement corrosion will be made. Having regard to the likely extent of further deterioration in the coming 15 years, we will assess the repair and strengthening works needed to sustain the buildings. Members of this Panel have been briefed on the outcome of the findings on So Uk, Sai Wan, Choi Hung, Model Housing, Wo Lok and Ma Tau Wai Estates<sup>1</sup>.

3. The investigations on Tung Tau Estate Block 22 and Fuk Loi Estate commenced in April 2007 and were completed in August 2007. The structural investigation findings and the recommended demolition and improvement works are set out in the following paragraphs.

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<sup>1</sup> Members were briefed on the outcome of the investigations on So Uk and Sai Wan Estate at the Panel meeting in May 2006 vide LC Paper No. CB(1) 1396/05-06(03), Choi Hung and Model Housing Estates in January 2007 vide LC paper No. CB(1) 562/06-07(06) and Wo Lok and Ma Tau Wai Estate in May 2007 vide LC Paper No. CB(1)1478/06-07(05).

## **Tung Tau Estate Block 22**

### ***Block Details***

4. Tung Tau Estate Block 22 was completed in 1965. It is a 16-storey building which provides 906 flats. The building layout plan is at **Annex A**.

### ***Structural Investigation Findings***

5. The investigation results reveal that Tung Tau Estate Block 22 is structurally safe. However, as a result of aging of various parts of the building and deterioration due to environmental impact, corrosion of reinforcement steel bars to varying degrees occurs at all elements and is deteriorating. If the block is to be sustained for at least 15 years, major repair works<sup>2</sup> are required to enhance the structural condition of the block.

### ***Clearance of Tung Tau Estate Block 22***

6. It is expected that the extensive repair works, in particular the replacement of asbestos panels, strengthening of structural elements and recasting of floor slabs, would likely cause considerable nuisance and disturbance to tenants. In addition, the financial assessment<sup>3</sup> indicates that the repair option would be less cost effective than the redevelopment option. The Housing Authority (HA) has therefore decided to clear Tung Tau Estate Block 22.

### ***Rehousing Arrangement***

7. Tung Tau Estate Block 22 currently has a population of around 1 400. Affected tenants will be rehoused at a suitable time. It is expected that there will be sufficient public rental housing flats available for rehousing in Wong Tai Sin, including Tung Tau Cottage Area West which will be completed in 2009/10 and Tung Tau Estate Phase 9 which is scheduled for completion in 2011/12. In addition, the HA has other vacant flats available for allocation to the affected tenants.

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<sup>2</sup> The major repair works include strengthening/repairing defective beams at external facade, 16 structural walls at toilets on G/F and 3/F, 15 roof slabs, relaying waterproof materials to toilet slabs and walls, balcony slab, and gable end walls, replacing roof water tanks with glass-reinforced plastic water tanks, strengthening/recasting the 16 domestic flats that were previously converted from refuse rooms, relaying defective screeds in public corridors, and repainting the existing strengthened steel members.

<sup>3</sup> If Tung Tau Estate Block 22 is to be sustained for at least 15 years, the repair cost required will be around \$48,000 per flat. In the past, when we decided to conduct repair works for Choi Hung, Wo Lok, Sai Wan, Model Housing, Ma Tau Wai and Fuk Loi Estate in order to sustain them for at least 15 years, the cost for each flat was less than \$12,000. As for So Uk Estate, the repair cost required would be more than \$46,000 per flat for sustaining the buildings for at least 15 years. It was therefore decided that the So Uk Estate should be cleared.

## Po Yan Catholic Primary School

8. Tung Tau Estate Block 22 is physically connected to Po Yan Catholic Primary School (the School). The Housing Department is responsible for the School's maintenance and repairs. As the School is structurally safe and having regard to the aspiration of the school management and its Parent-Teacher Association (PTA) to keep the School, the HA has decided to retain the School. The school management and the PTA welcome this decision. During the demolition and re-development of Tung Tau Estate Block 22, the Housing Department will apply a number of measures to ensure the safety of and minimize the nuisance to the teachers and students. Site activities will be scheduled to suit school examination periods and holidays. Hydraulic concrete crusher will be used during demolition and non-percussive piling method will be employed during construction to minimize noise emission. Dust suppression devices, such as dust-proof screens, will be used to minimize air pollution caused to the School. The Housing Department, representatives from the School and the Education Bureau will form a liaison group to ensure that the School will be operated in a safe environment during the works period, with disturbance to the teachers and students kept to the minimum.

## Fuk Loi Estate

9. Fuk Loi Estate was completed between 1963 and 1967, providing 3 129 flats in 9 blocks, of which five are 7 storeys high and four are 16 storeys high. An estate plan is at **Annex B**.

10. The investigation reveals that all the buildings are structurally safe and structural condition of all blocks are generally good. As the Housing Department had carried out extensive improvement works<sup>4</sup>, many common defects such as concrete spalling and water seepage on floors have been properly and timely addressed. It requires only minor repair/improvement works<sup>5</sup> to sustain the buildings for 15 years or more. In addition to these works, general estate improvement works, including the construction of lifts at 5 low blocks, will be carried out under the Total Maintenance Scheme to improve the living environment of the estate.

11. Members are invited to note the findings of the comprehensive structural investigations on Tung Tau Estate Block 22 and Fuk Loi Estate.

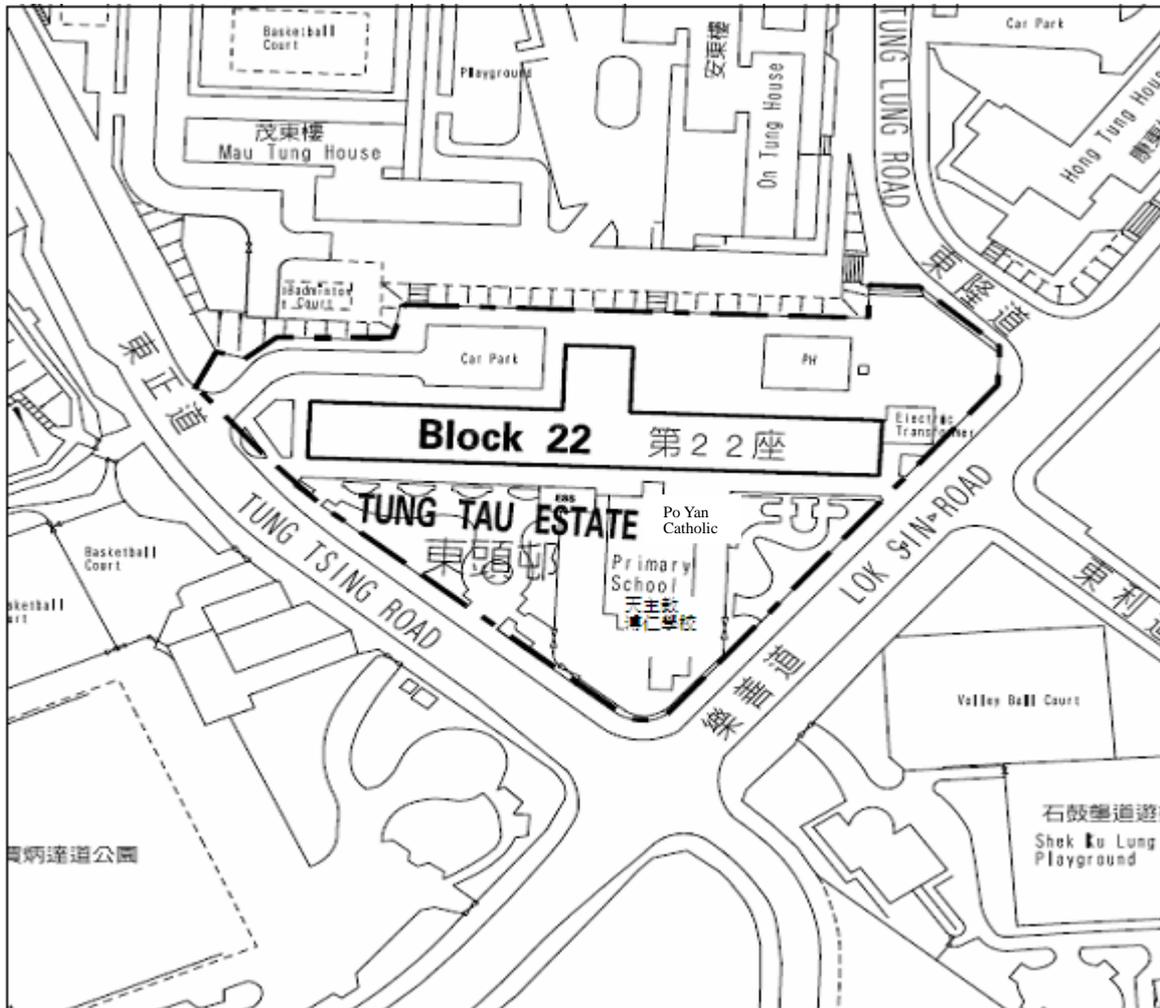
## Transport and Housing Bureau January 2008

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<sup>4</sup> For example, the Housing Department re-tanked all toilet floors and replaced defective balcony balusters in 1997.

<sup>5</sup> The required works include repairing/improving defective toilets and water tanks, re-screeding the floors at play areas, and repairing/strengthening concrete.

**Tung Tau Estate Block 22  
Building Plan**



**Fuk Loi Estate  
Estate Plan**

