

## Legislative Council Panel on Housing

### Report on the Findings of the Comprehensive Structural Investigation on Wah Fu Estate

#### Purpose

This paper informs Members of the outcome of the comprehensive structural investigation on Wah Fu Estate and the recommended repair and improvement works.

#### Background

2. In September 2005, the Housing Department (HD) launched a Comprehensive Structural Investigation Programme (CSIP) 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, the HD will make technical assessments of the concrete strength and extent of steel reinforcement corrosion. Having regard to the likely extent of further deterioration in the coming 15 years, the HD will assess the repair and strengthening works needed to sustain the buildings. Members of this Panel have been briefed on the outcome of findings on So Uk, Sai Wan, Choi Hung, Model Housing, Wo Lok, Ma Tau Wai, Tung Tau Block 22 and Fuk Loi Estates, as well as the proposal to expand the programme to cover other aged PRH estates<sup>1</sup>.

3. The comprehensive structural investigation on Wah Fu Estate commenced in August 2007 and was completed in April 2008. The structural investigation findings and the recommended improvement works in Wah Fu Estate 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 Estates at the Panel Meetings 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), Wo Lok and Ma Tau Wai Estates in May 2007 vide LC Paper No. CB(1)1478/06-07(05), and Tung Tau Estate Block 22 and Fuk Loi Estate in February 2008 vide LC Paper No. CB(1)712/07-08(03). Besides, Members were briefed on the proposal to expand the CSIP to cover other aged PRH estates in February 2008 vide LC Paper No. CB(1)712/07-08(04).

## Estate Details

4. Wah Fu Estate consists of Wah Fu (I) and (II). Wah Fu (I) was completed between 1967 and 1969, providing 4,800 flats of which five residential blocks are of 17 to 21 storeys high and seven are 10 to 15 storeys high. Wah Fu (II) was completed between 1970 and 1978, providing 4,347 flats in 6 residential blocks of 24 to 27 storeys high. An estate layout plan is at the Annex.

## Structural Investigation Findings and Way Forward

5. The investigation reveals that all the domestic buildings are structurally safe, though they have been deteriorated to varying degrees due to ageing and environmental conditions. To sustain the buildings for 15 years or more, structural repair and improvement works are required in various parts of the buildings<sup>2</sup>. The required structural repair and improvement works include repairing/improving defective cantilever corridor slabs, staircases and empty bay slabs, replacing concrete parapets by brick walls with windows at empty bays, relaying floor screeds to defective internal corridors, repairing defective roof canopies and applying protective coatings to the undersides of these canopies, repairing defective toilets and balconies and applying external-use paint to these ceilings, replacing defective balcony balusters and coping beams and defective roof waterproofing, repairing defective beams, columns, walls, deteriorated water tanks and floor expansion joints, repainting existing strengthening steel framework, and conducting normal concrete repairs.

6. Besides, in order to further enhance the living environment of the Estate, the Housing Authority (HA) will conduct other estate improvement works, including construction of lifts/escalators to facilitate access under the Estate Improvement Programme<sup>3</sup>. We will introduce less-disturbing repair methods<sup>4</sup> to minimize nuisance arising from the repair/improvement works.

7. Members are invited to note the findings of the comprehensive structural investigation on Wah Fu Estate.

## Transport and Housing Bureau June 2008

<sup>2</sup> The estimated average repair cost for Wah Fu Estate will be \$20,000 per flat, which is much less than the cost of repair works for Tung Tau Estate Block 22 (\$48,000) and So Uk Estate (\$46,000) which were recommended for clearance. Since Wah Fu Estate is close to the seashore and hence is vulnerable to severe environmental conditions which may lead to corrosion of steel bars in the concrete, the cost of repair works is moderately higher than those required (less than \$12,000) for estates recommended to be sustained in the past.

<sup>3</sup> The HA plans to install lifts/escalators to link up the locations with large level difference including: a) the connection between Wah Fu (I) and Wah Fu Road; and b) the connection among the Public Transport Interchange, Wah Cheong House and Wah Tai House. Consultation with the estate residents will be conducted.

<sup>4</sup> Including concrete removal using cutting tools with noise damping housings, dust screens to prevent dust from entering tenants' flats, rapidly demountable noise screens and temporary walking platforms to maintain access in corridors.

# Wah Fu Estate Layout Plan

