

# LCQ15: Structural safety of old buildings

Following is a question by the Hon Starry Lee and a written reply by the Secretary for Development, Ms Bernadette Linn, in the Legislative Council today (November 15):

Question:

Pursuant to the building collapse at No. 45J Ma Tau Wai Road on January 29, 2010, the Buildings Department (BD) immediately launched a special operation to inspect all private buildings aged 50 or above in Hong Kong, with a view to determining whether these buildings were structurally safe. On the other hand, it has been reported that in recent years, a number of incidents involving old buildings with concrete fallen off and even cracks appearing on external walls had happened in Hong Kong, posing serious potential hazards to the personal and property safety of members of the public. In this connection, will the Government inform this Council:

(1) whether the BD inspected all private buildings aged 50 or above in Hong Kong again after 2010, so as to update the structural conditions of such buildings; if so, of the following information relating to the relevant inspections: (i) the respective percentages of buildings with conditions under the categories of "Require emergency remedial works", "Obvious defects found", "Minor defects found" and "No apparent defect", as well as (ii) the items and scope of inspection, and whether the indoor common areas of the buildings were covered and structural inspections (including concrete carbonation tests) were conducted; if not, the reasons for that;

(2) given that according to the Report on the Inspection of Buildings aged 50 or above published by BD in 2010, among the buildings inspected, the condition of 1 030 buildings was categorised as "Obvious defects found", whether, after excluding those already demolished or planned for demolition, the remaining buildings have completed statutory investigations and repairs; if not, of the reasons for that;

(3) as it is learnt that the Urban Renewal Authority (URA) has established the Building Care Management Information System to collect information on the conditions and maintenance of buildings in old districts, whether the Government has exchanged information with the URA in order to grasp additional and more updated information on the conditions of buildings, thereby facilitating the discharge of duties and setting of work priorities by government departments; if not, whether the Government has established a database on the conditions and maintenance of all buildings in Hong Kong; and

(4) whether the authorities have conducted or planned to conduct random concrete carbonation tests for old buildings (e.g. buildings aged 30 or 50 or above) in Hong Kong, so as to ascertain the structural conditions of those old buildings and whether their conditions meet the expectation of the

statutory design?

Reply:

President,

Regarding the Member's question, having consulted the Urban Renewal Authority (URA) (in respect of part 3 of the question), my reply is as follows:

(1) In response to the building collapse incident at Ma Tau Wai Road in January 2010, the Buildings Department (BD) launched a special operation in the same year to inspect about 4 000 buildings aged 50 years or above in Hong Kong, with a view to ascertaining the structural safety of these buildings.

However, this was a special operation. If government departments were to take the lead in launching this kind of territory-wide inspection on an ongoing basis, this would require temporary deployment of a large number of in-house staff, which will affect the daily operation of the departments. With the increasing number of ageing buildings, this mode of handling building inspection and maintenance is not only unsustainable, but also may not be the best way to utilise limited public resources. A more proactive and sustainable approach is for the Government to strengthen owners' awareness of the need to take good care of their own properties and to take responsibility for the building safety and maintenance of their properties by adopting "risk-based" approach through the three-pronged approach of enforcement, support and, where necessary, proactive intervention.

Enforcement and support

The Mandatory Building Inspection Scheme (MBIS) fully implemented in 2012 upholds the concept of "prevention is better than cure", under which the BD serves statutory notices to owners of private buildings aged 30 years or above, requiring them to carry out prescribed inspections and repairs for their buildings before the specified deadlines. The scope of inspections and repairs covers the common parts of the buildings, external walls, prescribed projections and signboards erected on the buildings. Generally speaking, Registered Inspectors (RIs) will carry out visual inspections and/or by non-destructive means, such as hammer-tapping, and exercise professional judgement to ascertain whether there is a need to carry out detailed investigation and testing of the building structure or some of its components, having regard to the actual conditions of the building (see reply to part 4 below). Subsequently, the Government has since 2018 injected a total of \$6 billion for the URA to launch the Operation Building Bright 2.0 (OBB 2.0) to support owners to comply with MBIS notices and to carry out proper inspection and repair works as early as possible. As at May 2023, the BD had issued MBIS notices for the common parts of about 7 000 target buildings, of which around 5 000 are buildings aged 50 years or above, accounting for about 60 per cent of the buildings of this age.

Expired MBIS notices that have not been complied with involve about 3

800 buildings, of which about 1 100 buildings have been selected as Category 2 buildings (Note 1) under the OBB 2.0.

For the remaining some 2 700 target buildings with expired MBIS notices that have not been complied with, the BD had issued letters to relevant RIs, owners and owners' corporations (OCs) in batches before the end of September this year, requesting them to report progress and concrete work plan within one month. To date, the BD has received more than 1 900 responses so far. More than half of them have made substantive progress in the past few months following the Government's stepped-up efforts to follow up the cases. The BD will, depend on the content of the responses, take appropriate follow-up actions, such as making referrals to the URA or the Home Affairs Department (HAD) to provide appropriate assistance. For buildings for which responses have yet to be received, the BD and HAD will make further attempts to contact the RIs, owners and/or OCs concerned.

In addition, a standing communication mechanism led by the Development Bureau has been set up to co-ordinate the BD, the HAD and the URA to enhance tripartite co-operation. The three parties will continue to proactively provide information, co-ordination as well as technical and financial support to OCs and owners.

For cases without reasonable excuse and with poor progress, the BD will take prosecution action against the OCs or owners concerned from this quarter onwards. If there are cases in which owners show an intention to procrastinate, the BD will deal with such cases with priority and instigate prosecution proceedings as soon as possible. We would like to take this opportunity to appeal to the relevant owners and/or OCs again to take immediate follow-up action for their non-compliant MBIS notices, failing which they will be liable to prosecution.

#### Proactive intervention when necessary

For the aforesaid some 1 100 higher-risk buildings selected as Category 2 buildings under the OBB 2.0, the BD will exercise its statutory power to carry out prescribed inspections and repairs on behalf of the owners and recover the costs from them afterwards.

In addition, since early August, the BD has proactively arranged special inspections by drones of external walls of buildings with non-complied MBIS notices and with higher potential risks (e.g. older buildings, buildings with balconies/canopies of cantilevered slab structures, etc), and has also arranged for government contractors to carry out emergency works on behalf of the owners, and recover the costs from them afterwards. As at the end of October, the BD has completed the inspection of the external walls of about 100 buildings with higher potential risks, and will endeavour to deploy manpower and arrange for outsourced service to identify more buildings for emergency external wall inspection.

Apart from MBIS, through large scale operations (LSOs), the BD selects each year target buildings in dealing with dilapidated or defective external

walls and common parts of buildings as well as unauthorised building works (UBWs) to require owners to carry out repair works and removal of UBWs by issuing repair and removal orders. In addition, the BD will also follow up public reports on individual cases of dilapidated and defective buildings.

To further safeguard building safety and expedite compliance with the MBIS notices by owners or OCs, the Policy Address announced a comprehensive review of the MBIS policy in three directions. First, adopt a more precise approach in selecting target buildings for issuance of the MBIS notices. Second, proactively identify higher-risk buildings, and enhance the capabilities of the BD to inspect such buildings and carry out emergency repair works through outsourcing. Third, review the workflow of various stages of OBB 2.0 to assist and urge owners or OCs who have applied for the subsidy to expedite actions, such as streamlining the procedures for engaging building inspection professionals. We will put forward specific proposals in the first quarter of next year.

(2) The special inspection operation in 2010 identified 1 030 buildings with obvious defects, of which 319 had been demolished and the owners concerned of 338 had carried out repair works by themselves. For the remaining 373 buildings, the BD issued a total of 706 repair/investigation orders. (Note 2) As at the end of October this year, among the 706 repair/investigation orders issued, a total of 702 repair/investigation orders have been complied with. The BD has also exercised its statutory power in respect of the building involved in another investigation order to carry out the necessary investigation and repair works on behalf of the owner. The BD is now arranging for the acceptance of the works, and will recover the relevant costs from the owner later on. As the owners of the remaining three investigation orders have not commenced the required investigation works by the deadline, the BD has initiated prosecution action against the owners in two cases and is initiating prosecution against the owner in one case.

(3) The URA's building information system maintains information on the building conditions of private residential or composite buildings aged 30 years or above to facilitate the URA's urban renewal and building rehabilitation work. The relevant information is mainly derived from visual inspection of the conditions of internal and external common areas of buildings, which is normally carried out once every few years. Each time, a few thousand private residential or composite buildings aged 30 years or above are selected and statistical modelling is used to predict the conditions of the remaining buildings that have not been selected. To improve building safety, the BD has previously obtained information on the relevant system of the URA. When considering actions or strategies related to building safety, such as the selection of target buildings for MBIS, the BD will combine the information from URA's system with information from the BD for comprehensive analysis, so as to select target buildings in a more focused and precise manner.

(4) Carbonation tests on concrete primarily reflect the effect of carbonation on the pH value of the concrete cover, which diminishes the protection that concrete provides against corrosion to steel reinforcing bars. During follow-

up on reports on building dilapidation or defects, or in the course of LSOs, if elements of higher risk (such as cantilevered slab canopies) are found defective and require detailed investigation, the BD will issue investigation orders to the owners concerned, requiring them to appoint an Authorised Person to carry out investigation on the defective building elements and, depending on the actual condition of the buildings, to conduct necessary testing on a sampling basis (including carbonation tests on concrete). In addition, under the MBIS, RIs will, based on the actual conditions of the buildings (e.g. the defects are found to be not caused by normal deterioration, or the extent or causes of the defects cannot be ascertained at the time of inspection) and exercise of professional judgment, determine whether detailed investigation and testing, such as sampling for carbonation tests on concrete, test on chloride and cement content and coring, etc, are required, so as to comprehensively assess the concrete condition and formulate the relevant repair proposals.

Note 1: The Government allocated \$6 billion for the URA to implement OBB 2.0 to subsidise eligible owners in co-ordinating inspection and repair works in respect of common parts under the MBIS. Buildings that are able to co-ordinate the works among themselves may apply as Category 1 buildings. The BD will exercise its statutory power in carrying out the necessary inspection and repair works on behalf of the owners with the cost to be recovered from the owners after completion of works, for Category 2 buildings. Eligible owners can apply for OBB 2.0 subsidy for reimbursement of part or all of the cost of the works.

Note 2: As at times there could be more than one Deed of Mutual Covenant for a building, each building may be involved in more than one repair/investigation order.