

**CONTROLLING OFFICER'S REPLY**

**DEVB(PL)125**

**(Question Serial No. 1715)**

Head: (82) Buildings Department  
Subhead (No. & title): (-) Not Specified  
Programme: (1) Buildings and Building Works  
Controlling Officer: Director of Buildings (CHEUNG Tin-cheung)  
Director of Bureau: Secretary for Development

Question:

The Department mentioned in the Controlling Officer's Report that it "completed the consultancy study on the latest technological methods in identifying sources of water seepage in buildings". In this connection, please answer the following questions:

1. What latest technological methods in identifying sources of water seepage in buildings are proposed in the consultancy study?
2. In some cases of dispute over water seepage, the real cause of water seepage can be the flat a few floors above the affected flat. How accurate and reliable are the new technological methods compared with conventional testing methods? How effective in proving the case have they proven to be?
3. Is the Department preparing or starting to try out in pilot districts the new technological methods for investigation proposed in the consultancy study? If so, please provide the progress or timetable for formulating detailed technical guidelines; if not, what are the reasons?

Asked by: Hon MA Fung-kwok (LegCo internal reference no.: 1)

Reply:

1. The consultancy study commissioned by the Buildings Department (BD) recommended that the following five new testing methods may be applied for Stage III investigation:
  - (a) Infrared thermographic test (IT);
  - (b) Microwave concrete sub-layer moisture content test (MT);
  - (c) Radar scanning survey;

- (d) Static pressure test; and
- (e) Material analysis by microspectroscopy inspection.

2.&3. The consultant had conducted an in-depth study on the above testing methods including carrying out field tests to assess the methods and considered that the tests are technically feasible to assist the identification of the source of water seepage in buildings. The new testing methods have their respective strengths and limitations. For example, while MT and IT could be effective in investigating seepage through concrete slabs, they could not be effectively applied under some circumstances such as cases involving ceilings with concrete spalling, ceilings with tile finishes and blockage by pipes/building services. Where the new testing technologies could not be effectively applied, the Joint Office (JO) set up by the Food and Environmental Hygiene Department and BD has to resort to conventional testing methods.

Since the second half of June 2018, JO has applied new testing technologies such as IT and MT in three pilot districts (i.e. Kowloon City, Wanchai and Central and Western). With the experience and data obtained through the pilot application of new testing methods, JO will evaluate the effectiveness of the new testing technologies and refine the technical guidelines and procedures relating to the use of the testing methods. JO will progressively extend the use of the new testing methods to other pilot districts in the third quarter of 2019.

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