

**CONTROLLING OFFICER'S REPLY**

**DEVB(PL)301**

**(Question Serial No. 3616)**

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:

It is mentioned in the Programme that the work in 2018 includes “completing the consultancy study on the latest technological methods in identifying sources of water seepage in buildings”. In this connection, please inform this Committee:

- 1) Additional advanced technological testing methods for investigation of water seepage in buildings such as microwave tomography and infrared thermography are proposed in the study. What are the details of the work of formulating detailed technical guidelines for application of these methods in pilot districts in 2018-19 and the expenditure involved?
- 2) When are these methods expected to be applied in the daily work of the Joint Office set up by the Buildings Department and the Food and Environmental Hygiene Department?

Asked by: Hon WU Chi-wai (LegCo internal reference no.: 72)

Reply:

- 1)&2) 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 micro-spectroscopy inspection.

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 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 gained 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.

In 2018-19, the expenditure for engaging outsourced consultants for professional investigation is about \$37 million. BD does not compile statistics on the cost of water seepage investigation solely using new technologies.

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