

CONTROLLING OFFICER'S REPLY

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(Question Serial No. 2444)

Head: (82) Buildings Department

Subhead (No. & title): (-) Not Specified

Programme: (1) Buildings and Building Works

Controlling Officer: Director of Buildings (YU Tak-cheung)

Director of Bureau: Secretary for Development

Question:

The Joint Office for Investigation of Water Seepage Complaints (JO) under the Food and Environmental Hygiene Department and the Buildings Department has applied new testing technologies, including infrared thermography (IT) and microwave tomography (MT), to identify the sources of water seepage in three pilot districts since 2018, and the pilot adoption has been extended to five other districts subsequently. Please inform this Committee of the following:

- (1) the number of requests for assistance received by JO in 2019-20; the numbers of cases where the source of water seepage could be identified, where the investigation is undergoing and where the source could not be identified; and the time spent on handling the cases (the longest and the shortest duration);
- (2) further to the above question, of the above requests for assistance, the number of requests made in Kwun Tong, Wong Tai Sin and Wan Chai districts;
- (3) further to question (1), among the requests for assistance, the respective numbers and proportions of cases adopting new and conventional testing methods to identify the sources of water seepage; and the percentage changes as compared with the figures in the past three financial years;
- (4) the successful rate of new testing methods in identifying the sources of seepage as compared with the conventional technologies;

- (5) whether the eight pilot districts adopting new technologies as mentioned above have a higher successful rate in identifying the sources of seepage than other districts not adopting such technologies; if yes, whether the Government will expedite the extension of adoption to the whole territory (especially districts teemed with old buildings where water seepage is prevalent, such as Kwun Tong and Wong Tai Sin districts); if so, of the details and timetable of implementation; if no, of the reasons; and
- (6) whether members of the public seeking assistance could request JO to adopt IT or MT technologies to identify the sources of seepage and avoid conventional testing methods that are ineffective and inefficient, so as to shorten the handling time for each case.

Asked by: Hon TSE Wai-chun, Paul (LegCo internal reference no.: 15)

Reply:

- (1) Statistics on handling of water seepage reports by the Joint Office (JO) set up by the Food and Environmental Hygiene Department and the Buildings Department (BD) in 2019 are tabulated below –

Number of Cases	2019
Reports received	34 169
Reports handled ⁽¹⁾	28 096
• Cases screened out ⁽²⁾	13 867
• Cases with investigation concluded	14 229
- Cases with source of water seepage identified	5 663
- Cases with source of water seepage not identified and investigation terminated	2 891
- Cases with seepage ceased during investigation	5 675
Reports undergoing investigation ⁽¹⁾	11 655

Note⁽¹⁾: The number of reports handled does not necessarily correspond to the number of reports received in the same year.

Note⁽²⁾: These include unjustified cases not meeting the 35% moisture content criterion and withdrawn cases, etc. where no investigation was conducted by JO.

The time spent on investigating a water seepage case varies due to a number of factors, including the nature and complexity of the case and whether the relevant owners or occupants are cooperative as JO staff have to enter the premises concerned for carrying out non-destructive tests to identify the source of seepage. Generally speaking, JO could normally complete the investigation and inform the informant of the outcome within 90 working days with the co-operation of the concerned owners/occupants. If the investigation could not be completed within 90 working days, JO will notify the informant of the progress of the investigation. JO does not compile statistics on the time for investigating water seepage cases.

- (2) In 2019, the numbers of water seepage reports received by JO in Kwun Tong, Wong Tai Sin and Wan Chai districts were 3 077, 1 501 and 1 402 respectively.
- (3) Generally speaking, JO staff are responsible for carrying out initial investigation of the source of seepage, such as colour water test for drainage pipes. In cases where the source of seepage cannot be identified by the initial investigation, JO staff will carry out a professional investigation with the assistance of outsourced consultants. Statistics on professional investigation of water seepage reports by adopting conventional testing methods and new testing methods in the past three years are tabulated below –

	2017	2018	2019
(a) Concluded cases involving conventional testing methods ⁽¹⁾	15 873	13 650	14 229
(b) Among the cases in (a) above, cases required professional investigation	11 190	9 716	10 078
(c) Concluded cases involving the use of new testing methods ⁽²⁾	27	92	620

Note ⁽¹⁾: Conventional testing methods include colour water test, water ponding test, water spray test and reversible pressure test.

Note ⁽²⁾: New testing methods include infrared thermography (IT) and microwave tomography (MT).

- (4) to (6) 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), where applicable. With experience gained and data obtained through pilot application of the new testing technologies, JO has since September 2019 extended the new testing technologies to another five pilot districts (i.e. Sham Shui Po, Kwai Tsing, Tuen Mun, Tai Po and North District). As at 31 December 2019, the success rate ^(Note) of cases using the new testing technologies is some 80%, which is higher than the success rate of around 60% for cases using the conventional methods. JO is refining the technical guidelines and procedures relating to the use of the new testing technologies and is planning to gradually extend such technologies to other districts. In non-pilot districts, depending on the circumstances, JO will consider using the new testing technologies for more complicated cases where the source of water seepage cannot be identified by conventional testing methods. While IT and MT 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 IT and MT could not be effectively applied, JO has to resort to conventional testing methods.

Note: Success rate =	Cases with source of water seepage identified	
	Cases with source of water seepage identified	+ Cases with source of water seepage not identified and investigation completed (excluding cases where investigation has not been completed due to, e.g. seepage ceases to exist during investigation)