

**For discussion  
on 20 January 2020**

**LEGISLATIVE COUNCIL  
PANEL ON DEVELOPMENT AND  
PANEL ON HOME AFFAIRS**

**JOINT SUBCOMMITTEE TO FOLLOW UP ISSUES RELATING  
TO THE REDEVELOPMENT, MAINTENANCE AND  
MANAGEMENT OF AGED BUILDINGS**

**Briefing on the Work of the Joint Office for Investigation of  
Water Seepage Complaints**

**PURPOSE**

This paper briefs Members on the work progress of the Joint Office (JO) set up with staff of the Food and Environmental Hygiene Department (FEHD) and the Buildings Department (BD) in handling water seepage reports.

**BACKGROUND**

2. Proper management, maintenance and repair of buildings, including resolving water seepage problems in buildings, are the responsibilities of building owners. If water seepage occurs in private buildings, the owners should first arrange their own investigation into the cause and, as appropriate, co-ordinate with other owners and occupants concerned for repair works. If the water seepage condition has caused health nuisance, risk to the structural safety of the building or waste of water, the Government will take respective enforcement action under the Public Health and Municipal Services Ordinance (PHMSO) (Cap. 132),

the Buildings Ordinance (Cap. 123) or the Waterworks Ordinance (WO) (Cap. 102).

3. The establishment of JO is based on the recommendation of the Team Clean Report in 2003. Its aim is to set up a working team with both the legal authority of FEHD in handling water seepage nuisance under the PHMSO and the building surveying expertise of BD. The synergy allows JO to investigate and identify the source of seepage causing nuisance as well as taking enforcement action accordingly. JO was formally established and came into operation in 2006. Over the twelve years between 2007 and 2018, the number of water seepage reports received per annum has increased considerably (from 17 000 reports in 2007 to 36 000 reports in 2018); there has also been increase in resources over the same period (the manpower of JO increased from 81 to 227 for FEHD and from 60 to 76 for BD, while the yearly expenditure on engaging consultants in assisting in Stage III investigation (paragraph 4(c) below refers) increased from \$7.5 million to \$36.7 million).

## **WATER SEEPAGE INVESTIGATION AND ENFORCEMENT ACTION BY JO**

4. As private properties are involved, upon receipt of a report on water seepage in a building, JO will carry out non-destructive investigation and tests. JO's investigation of water seepage cases is generally carried out in the following three stages:

- (a) Stage I aims to confirm that there is a water seepage condition;
- (b) Stage II initial investigation includes moisture monitoring at seepage locations, colour water test of drainage pipes and reversible pressure test for water supply pipes; and
- (c) Stage III professional investigation includes moisture monitoring at seepage locations, ponding test for floor slabs, water spray test on walls as well as reversible pressure test for water supply pipes. For more complicated cases and

also suitable cases in pilot districts (please see paragraphs 7 and 8 for details), new testing technologies, such as infrared thermography (IT) and microwave tomography (MT), will be used.

JO staff are responsible for Stages I and II investigation. Stage III investigation is carried out with the assistance of outsourced consultants.

5. If the source of seepage causing health nuisance can be identified during investigation, JO will issue a “Nuisance Notice” in accordance with the relevant provisions of the PHMSO to the person concerned requiring repair works to be carried out and abatement of the health nuisance within a specified period, failing which the person will be subject to prosecution. Upon conviction, the person concerned is liable to a maximum fine of HK\$10,000 and a daily fine of HK\$200. JO may also apply to the Court for a “Nuisance Order” requiring the person concerned to abate the nuisance within a specified period. Failure to comply with the order will result in prosecution. Upon conviction, the penalty will be a maximum fine of HK\$25,000 and a daily fine of HK\$450. The statistics in respect of the water seepage reports handled by JO in the past five years are at **Annex I**.

## **ENHANCING EFFICIENCY OF JO**

6. JO is facing many challenges in recent years, including an upsurge of water seepage reports, difficulties in gaining co-operation from owners or occupants<sup>1</sup> and the limitations of tests. In face of various challenges, JO is pressing ahead with various tasks including arranging full use of new testing technologies in pilot districts to accumulate experience for gradual extension of their application to all districts in the territory, reviewing comprehensively on JO’s operations, setting up four regional joint offices (RJOs) to strengthen communication between staff of the two departments and enhance work efficiency, as well as stepping up publicity and education. The progress of various tasks is set out below.

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<sup>1</sup> In case access to premises for investigation is denied, JO has to apply for an entry warrant from the Court under the PHMSO in order to gain entry to the premises concerned for investigation.

## New Testing Technologies

7. The current conventional testing methods for JO to investigate water seepage cases include moisture monitoring at seepage locations, colour water test of drainage pipes, ponding test and water spray test for floor slabs and walls as well as reversible pressure test for water supply pipes. Depending on the seepage condition, each case may involve more than one testing method. To further enhance the success rate of identifying sources of water seepage, BD commissioned a consultancy study to explore the feasibility of using the latest non-destructive testing technologies. After considering the findings of the study, JO has applied IT (mainly for detecting the areas affected by seepage) and MT (mainly for determining the source of seepage by detecting the data which reflects the moisture content of concrete floor slabs) in the Stage III investigation of all suitable cases<sup>2</sup> in Kowloon City, Wan Chai and Central and Western District since the second half of June 2018.

8. So far, the success rate among cases using the new testing technologies and completing analysis in identifying sources of water seepage is about 78%, which is higher than that of using conventional methods (around 60%<sup>3</sup>). JO has therefore since September 2019 extended the above new testing technologies to another five districts, namely Sham Shui Po, Kwai Tsing, Tuen Mun, Tai Po and the North District. For more complicated cases in non-pilot districts, if the source of seepage cannot be identified by conventional testing methods, JO will consider using the new testing technologies depending on the circumstances. 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. Apart from the two new testing technologies above, JO is identifying service providers in

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<sup>2</sup> The new testing technologies have their limitations. For example, IT and MT cannot be effectively applied in cases involving spalling of concrete ceiling at the locations of water seepage, blockage of pipes and other facilities, or tile finishes on ceilings. Conventional testing methods have to be used in these cases.

<sup>3</sup> The success rate is the percentage of cases where the source of water seepage could be identified out of the total number of cases investigated (excluding cases with seepage ceased during investigation).

the market for another new testing technology, namely material analysis by micro-spectroscopy inspection<sup>4</sup> and is preparing to commission a consultant to pilot its use.

### Review Task Force

9. To further improve handling of water seepage cases, in addition to actively exploring the use of new testing technologies, a task force on review of operations of the JO (Task Force) comprising representatives from Development Bureau, Food and Health Bureau, FEHD, BD and Water Supplies Department (WSD) was formed in early 2018. The latest progress of the review is as follows:

- (a) WSD's early involvement in investigation of continuous water dripping reports

Currently, JO refers water seepage cases involving leakage of water pipes identified during investigation to WSD for follow-up. If waste of water is involved, WSD will take enforcement action in accordance with the WO, requesting repair and rectification of the water seepage. JO referred 496 and 613 cases to WSD for follow-up actions in 2017 and 2018 respectively.

After analysis, reports of continuous water dripping at a steady rate are often related to leakage of water pipes. Therefore, to identify the source of water seepage as soon as possible, the Task Force has implemented a half-year pilot scheme since December 2019, under which immediate referral of such water seepage reports will be made to WSD and JO for follow-up actions in parallel. The Task Force will review the arrangement after the pilot period for consideration of making the arrangement permanent.

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<sup>4</sup> It is a material identification technology which uses infrared, ultraviolet and mass spectra to help identify the dye used in colour water test. Such technology is more sensitive and reliable.

(b) Water Seepage Complaint Management System

In October 2016, a recommendation was made in the Audit Report on JO's work to develop a system for handling and recording water seepage cases to monitor the investigation progress and take follow-up actions more effectively. The information system has been put into use on a trial basis since March 2018. JO has been closely monitoring its operation. The system performs functions including case management, issuing reminders and alerts, as well as monitoring consultants' performance for investigations at different stages. JO is now enhancing the system, and will periodically generate management returns to facilitate more effective monitoring of follow-up actions of water seepage cases, and record the time spent on completing the cases. After collecting and processing relevant data, JO plans to formulate pragmatic performance indicators for handling straightforward cases and publish the performance results regularly.

(c) Setting up a customer service team

The Task Force plans to set up a customer service team in JO. The key service areas of the team will include assisting both parties involved in disputes over inter-floor water seepage and, suggesting ways to resolve disputes according to case circumstances with a view to encouraging a more effective resolution of water seepage problems. The team will also promote public education in respect of water seepage in buildings. We expect the team will be set up within the 2020-21 financial year.

(d) Streamlining work procedures

The Task Force is currently comprehensively reviewing procedures of JO at all stages of investigation to streamline unnecessary procedures and simplify tedious ones. Measures

implemented at this stage include standardising the methods and specifications of tests in various investigation stages; streamlining the application procedures for a warrant to effect entry to a premises; devising reference templates of necessary court documents and rationalising the file movement between staff of the two departments, etc.

Work of the Task Force is ongoing and is expected to be completed in mid-2021.

### Setting up RJOs

10. Currently, FEHD staff of JO are deployed to 19 District Environmental Hygiene Offices under FEHD, while BD staff of JO are mainly deployed to the District Environmental Hygiene Offices of FEHD in Mong Kok, Kowloon City, Kwun Tong and Chai Wan. JO plans to set up four RJOs in Hong Kong, Kowloon, New Territories East and New Territories West to enable JO staff to work in the same office with a view to strengthening communication between JO staff of the two departments thereby enhancing work efficiency. The Hong Kong RJO, located in Wong Chuk Hang, came into operation in early January 2020; preparatory works for Kowloon RJO and New Territories West RJO, located in Kowloon Bay and Tsuen Wan respectively, are underway; the location of the New Territories East RJO will also be confirmed soon. The remaining three RJOs are expected to be set up progressively in the 2020-21 financial year.

### Publicity and Education

11. JO promotes to the public the responsibilities and ways to deal with water seepage in buildings through community talks, workshops organised for property management companies and owners' corporations, seminars on building management, etc. Besides publishing publicity pamphlets, JO has also launched a TV announcement of public interest to encourage the public to resolve water seepage problems and disputes in

an amicable manner with their neighbours. JO will continue to step up publicity and education efforts in this aspect.

**Development Bureau**  
**Food and Health Bureau**  
**January 2020**



## Annex I

### Statistics on water seepage reports handled by JO

	2015	2016	2017	2018	2019 (as at 31 October)
Number of water seepage reports received	29 617	36 376	36 002	36 684	29 786
Number of reports handled <sup>1</sup>	25 093	29 148	30 605	28 221	22 761
Cases screened out <sup>1, 2</sup>	12 000	13 196	14 732	14 571	11 498
Cases investigated <sup>1</sup>	13 093	15 952	15 873	13 650	11 263
(a) Source of water seepage identified	4 679	6 846	6 253	5 729	4 632
(b) Source of water seepage not identified and investigation terminated	3 494	3 721	4 172	3 164	2 293
(c) Seepage ceased during investigation	4 920	5 385	5 448	4 757	4 338
Success rate of sources of water seepage identified amongst cases investigated = $\frac{(a)}{(a)+(b)+(c)} \times 100\%$	35.7%	42.9%	39.4%	42%	41.1%
Success rate of sources of water seepage identified amongst cases where investigation was completed = $\frac{(a)}{(a)+(b)} \times 100\%$	57.2%	64.8%	60.0%	64.4%	66.9%
Nuisance Notices issued <sup>1</sup>	4 988	5 584	5 006	5 110	4 076
Nuisance Orders granted by the Court <sup>1</sup>	16	33	39	34	41
Number of Prosecutions <sup>1, 3</sup>	61	95	114	82	95
Convictions	44	68	49	105	172
Range of fines	\$800- \$5,000	\$400- \$4,000	\$500- \$5,000	\$500- \$8,000	\$500- \$10,000

<sup>1</sup> These cases do not necessarily correspond to the reports received in the same year.

<sup>2</sup> These include the unjustified cases and cases withdrawn by informants, for which no investigation will be made by JO.

<sup>3</sup> These include the prosecutions for failure to comply with Nuisance Notices and Nuisance Orders.