

Notes to Owners/Occupants
General Procedures for Investigating Water Seepage in Pilot Districts¹
Joint Office of the Buildings Department and
the Food and Environmental Hygiene Department

Responsibilities of Owners and Occupants

1. Water seepage in buildings is generally caused by defective building fabric or installations and lack of proper maintenance. Proper management, maintenance and repair of buildings, including resolving water seepage problems, are the responsibilities of building owners and occupants. The co-operation of owners and occupants concerned is essential for resolving water seepage problems. In general, if water seepage occurs in private buildings, owners should first arrange their own investigation into the cause of seepage and, as appropriate, co-ordinate with the occupants and other owners concerned for repair works.
2. Under normal circumstances, seepage originated from penetration of rainwater through roofs, flat roofs, balconies, external walls or windows of a building or from leaking water pipes will not cause any public health implications and is not nuisance actionable by the Joint Office (JO) under the Public Health and Municipal Services Ordinance (PHMSO)(Cap. 132).

Objective of the Joint Office

3. The objective of JO is to identify the source of seepage by means of systematic investigation through the powers conferred by the PHMSO and the professional expertise of the relevant government departments, as well as the co-operation of the owners and occupants, with a view to requiring the owners concerned to carry out repair in order to abate the nuisance arising from water seepage actionable under the PHMSO.
4. Reinstatement or repair of the affected premises or areas will not be undertaken by JO. Owners may make reference to the guidelines in Chapter 4.1.3 of the Building Maintenance Guidebook uploaded on Buildings Department (BD)'s website for carrying out the repair works.

<https://www.bd.gov.hk/en/resources/codes-and-references/codes-and-design-manuals/bmg.html>



¹ The pilot districts are Central and Western, Wan Chai, Eastern, Southern, Kowloon City, Sham Shui Po, Kwai Tsing, Tuen Mun, Tai Po and Sai Kung.

General Procedures

5. Within 6 working days upon receipt of a report, JO staff will contact the informant to arrange an inspection to the affected premises. The informant should assist JO staff in arranging access to the affected premises or area, and remove any obstruction (e.g. false ceiling, personal belongings, etc.) that tends to conceal the seepage location in order to facilitate investigation.
6. If water seepage nuisance is identified, JO staff will carry out investigation and non-destructive tests systematically at the premises suspected to have caused the seepage (suspected premises) so as to identify the source of seepage. For simple and straightforward cases with the co-operation of the owners and occupants concerned, JO normally will complete the investigation and tests and inform the informant of the outcome within 90 working days. If the investigation cannot be completed within 90 working days, JO will notify the informant in writing of the investigation progress.
7. In the case that access to the suspected premises for investigation is denied, JO may apply for a warrant to effect entry into premises from the Court in order to proceed with the investigation and tests.
8. If the source of seepage causing nuisance is identified during the investigation, JO will issue a nuisance notice to the person concerned under the PHMSO, requiring the abatement of nuisance within a specified period of time. JO will consider instigating prosecution against non-compliance with the nuisance notice. The person concerned may consider consulting building professionals / building contractors on the proper ways of repair works, if required. The person concerned may also contact JO for enquiries or request for obtaining a copy of water seepage investigation report to assist the person concerned to comply with the nuisance notice.
9. If the seepage becomes mild or improves significantly during investigation or the source of seepage cannot be identified after tests, the investigation of JO will cease. If there is no substantive evidence to prove any contravention of the provisions of the PHMSO, JO will have no legal basis to take any enforcement action.
10. If building /drainage pipe defects or wastage of water² caused by a defective water supply pipe is found during the investigation, JO will refer the case to BD or the Water Supplies Department (WSD), for follow-up and enforcement action in accordance with the Buildings Ordinance (Cap. 123) or the Waterworks Ordinance (Cap. 102) respectively.

² WSD will not intervene in a private dispute arising from a mild water seepage nuisance where there is no evidence of wastage of water.

Investigating Water Seepage Problems

11. In general, water seepage investigation by JO will be conducted in 3 stages.

Stage I – Confirmation of Water Seepage Condition (by JO staff)

12. JO staff will visit the informant's premises to record the condition of the seepage location and other relevant information. If the moisture content of the seepage area is found equal to or exceeding 35%³ and the seepage problem is suspected to have been caused by other premises, Stage II – Initial Investigation will be carried out.

Stage II – Initial Investigation (normally by JO staff)

13. One or several of the following tests will be conducted, depending on the circumstances of the case:

| Test method | Test location | Premises involved | Time required⁴ |
|---|------------------------------------|---|----------------------------------|
| Moisture Content Monitoring ³ (using moisture meter) | Wall surface/ceiling | Informant's premises | About 0.5 hour |
| Colour Water Test ⁵ (using colour water ⁶) | Drainage outlet | Suspected premises | About 1 hour |
| Reversible Pressure Test ⁷ | Water supply pipe and seepage area | Suspected premises and informant's premises | About 3 to 5 hours |

14. Normally, JO staff will visit the premises concerned once or twice for investigation and tests. For complicated cases (e.g. involving several bathrooms or seepage locations), multiple visits to the informant's premises and the suspected premises may be required for investigation, tests, reviews of test results or monitoring any changes in the seepage condition. If a case is so complicated that the source of seepage cannot be identified, JO will proceed to Stage III – Professional Investigation.

³ JO will not investigate water seepage reports with moisture content below 35%. If the moisture content at the seepage area is below 35% during stage II or III investigation, JO will cease to follow up the water seepage investigation in accordance with the established procedures.

⁴ Time required for each test may vary according to site condition.

⁵ Colour water will be poured into the drainage outlets. The seepage area in the informant's premises will be reviewed for any seepage of colour water.

⁶ Appropriate precautionary measures will be taken according to site circumstances and needs to avoid spillage of colour water outside the testing areas. In case, any person accidentally comes into direct contact with the colour water, general hygiene practices should be observed. If feeling unwell, please seek medical attention properly.

⁷ Applicable to suspected leakage from water supply pipes and continuous water dripping in the seepage area. The rate of water dripping or moisture content will first be recorded. Then, the water supply mains at the suspected premises will be turned off and all taps will be turned on to drain off the water and release the pressure inside the pipes. The change in water dripping or moisture content will be monitored and recorded afterwards. The water supply mains at the suspected premises will then be turned on and all taps will be turned off to resume the pressure inside the pipes. The change in water dripping or moisture content will then be monitored and recorded again.

Stage III – Professional Investigation (normally by JO’s consultants)

15. One or several of the following tests will be conducted, depending on the circumstances of the case⁸:

| Test method | Test location | Premises involved | Time required⁹ |
|--|---|---|----------------------------------|
| Moisture Content Monitoring ³ (using moisture meter) | Wall surface/ceiling | Informant’s premises | About 0.5 hour |
| Ponding Test for Floor ¹⁰ (using colour water ¹¹) | Floor slab of bathroom/shower compartment/kitchen | Suspected premises | About 1 to 2 hours |
| Spray Test for Wall ¹² (using colour water ¹¹) | Wall surface of bath tub/shower tray/shower compartment | Suspected premises | About 15 minutes |
| Reversible Pressure Test (if not carried out in Stage II) | Water supply pipe and seepage area | Suspected premises and informant’s premises | About 3 to 5 hours |
| Infrared Thermography ¹³ | Seepage area (normally for ceiling) | Informant’s premises | About 0.5 hour |
| Microwave Tomography ¹⁴ | Seepage area (normally for ceiling) | Informant’s premises | About 2 to 4 hours |

16. Normally, JO’s consultants will visit the premises concerned once or twice for investigation and tests during Stage III – Professional Investigation¹⁵. For complicated cases (e.g. involving several

⁸ In general case, if Infrared Thermography and Microwave Tomography have already been conducted, no further ponding test and spraying test would be conducted and vice versa.

⁹ Time required for each test may vary according to site condition.

¹⁰ The drainage outlet will be plugged before the test. The test area will be flooded with colour water and cleaned with clear water after the test. Upon completion of the test, the seepage area in the informant’s premises will be reviewed for any seepage of colour water.

¹¹ Appropriate precautionary measures will be taken according to site circumstances and needs to avoid spillage of colour water outside the testing areas. In case, any person accidentally comes into direct contact with the colour water, general hygiene practices should be observed. If feeling unwell, please seek medical attention properly.

¹² Colour water will be sprayed on the walls of bath tub, shower tray or shower compartment. Upon completion of the test, the seepage area in the informant’s premises will be reviewed for any seepage of colour water.

¹³ If the site circumstances are considered suitable, infrared thermographic imagers may be used to record infrared images of the seepage areas for investigating the location and extent of seepage.

¹⁴ If the site circumstances are considered suitable, microwave moisture sensing device may be used to measure the referenced moisture content data of the sub-layers of the concrete floor slab for analysing the source of seepage. However, the test cannot be effectively applied under the following circumstances. a) The affected area (i.e. area with MC > 35) is small; b) The area with the most severe seepage problem has concrete spalling or other obstructions for carrying out the test, such as drainage pipes /ceilings with tile finishes /false ceiling; c) There is no water supply point above the affected area; d) The affected area is mainly at wall or beam side/soffit; e) The seepage area is close to pipe duct and the pipe duct at suspected premises is inaccessible for inspection; f) Cases with multiple suspected premises; g) Cases without record of slab thickness.

¹⁵ If the site circumstances are suitable for using microwave moisture sensing device, generally only one visit to the relevant premises is required for investigation and tests. However, if the site circumstances are not suitable for using microwave

bathrooms or seepage locations), multiple visits to the informant's premises and the suspected premises may be required for investigation, tests, reviews of test results or monitoring any changes in the seepage condition.

17. Before the visit, JO will issue a letter to inform the occupants of the premises concerned of the appointment of the consultant, the names and contact telephone numbers of the staff of JO and the consultant, and a sample of the consultant's staff card issued by JO. When visiting the premises concerned, the consultant's staff should bring along their staff cards for identification and verification by the public. The public may also contact JO and the consultant to verify the identification of the consultant's staff.

Names and contact telephone numbers of consultants employed by JO for water seepage investigation can be downloaded from the website below:

https://www.bd.gov.hk/doc/en/resources/faq/Water_Seepage_Problem_Consultants_List_e.pdf



Request for Copy of Investigation Report

18. If the owners / occupants concerned wish to obtain a copy of the water seepage investigation report, request may be made under the Code on Access to Information. The applicant should submit an application form to JO through mail or facsimile. The application form can be downloaded from the website below:

<https://www.access.gov.hk/filemanager/content/howtomakeinfo/ati.pdf>



The office hours, addresses, e-mail addresses, contact and facsimile numbers of 4 Regional JO are available at the Food and Environmental Hygiene Department (FEHD)'s website below:

https://www.waterseepage.gov.hk/en/about_us/joint_office.html



moisture sensing device, conventional testing methods such as ponding test and spray test need to be applied. If there is suspicion of leakage in the water supply pipe, reverse pressure test will be conducted. In these cases, multiple visits to the informant's premises and the suspected premises may be required by JO's consultants for investigation and tests.

For obtaining a copy of Stage I and II investigation report, the photocopying charges are listed on the FEHD's webpage below:

https://www.fehd.gov.hk/english/department/code_on_access_info_proce.html



For obtaining a copy of Stage III investigation report, the photocopying charges are listed on BD's webpage below:

https://www.bd.gov.hk/en/resources/request-for-information/index_fees.html



Resolving Seepage Problems by Owners

19. Apart from seeking assistance from JO, owners or occupants may cooperate among each other to engage professionals/consultants for carrying out investigation to identify the source of seepage and conducting necessary repair works to resolve the water seepage problems. Consultants/professionals are available in the market to provide services for investigating and resolving water seepage problems. The following hyperlinks are provided by the Hong Kong Institute of Surveyors (HKIS)¹⁶:

List of Consultancy Firms providing Advice on Water Seepage Problems:

https://www.hkis.org.hk/en/company_list.html?division=BSD&keyword=&print=



List of Experts on Water Seepage Investigation:

<https://www.hkis.org.hk/en/experts.html?category=1>



¹⁶ Owners are responsible for making their own assessment of all information in the Lists. The HKIS should be contacted should there be any queries on any matters regarding the Lists. The Lists are compiled, maintained and provided by the HKIS. The Government of the HKSAR plays no part in the compilation of the Lists and shall not be responsible for any inaccuracies in the Lists nor any errors/incomplete information arising from the hyperlinks nor any loss or damage whatsoever arising out of or in connection with any information or the performance of the service providers in the Lists. The service providers in the Lists should not be regarded as endorsed or recommended by the BD or the Government of the HKSAR nor imply that the Government of the HKSAR promotes their expertise or their business.

20. If water seepage problems involve the water supply system, owners may appoint a plumber licensed under the Waterworks Regulations (Cap. 102A) for checking the system and carrying out the necessary repair works. The Licensed Plumber Directory is available on WSD's webpage below:

<http://www.wsd.gov.hk/en/plumbing-engineering/licensed-plumbers/index.html>



21. If necessary, owners may consider seeking legal advice from your lawyer or mediation for resolving water seepage problems. Relevant information can refer to the website below.

<https://www.hklawsoc.org.hk/en/Serve-the-Public/Everyday-Life-Legal-Issues/Law-Society-Leaflets>



22. Owners may also consider approaching the Hong Kong International Arbitration Centre (tel: 2525 2381) to assist in mediation, or consider seeking the help of Building Affairs Expert Determination Centre. Relevant information can be downloaded from the website below.

https://www.hkis.org.hk/en/division_bsd.html?id=196



Assistance Schemes

23. The Integrated Building Rehabilitation Assistance Scheme (IBRAS) is a one-stop service coordinated by the Urban Renewal Authority, providing financial assistance and technical support to building owners. Home Renovation Interest-free Loan, Building Maintenance Grant Scheme for Needy Owners and Building Safety Loan Scheme under IBRAS are applicable to water seepage related repair works. Eligible persons may apply for a loan or subsidy for carrying out water seepage related repair works. Details are available on the webpage below:

<https://brplatform.org.hk/en/subsidy-and-assistance/integrated-building-rehabilitation-assistance-scheme>



Thematic Water Seepage Webpage

24. The JO has set up a one-stop thematic webpage on water seepage, so as to facilitate the public to obtain information for water seepage and related issues. Details are available on the webpage below:

<https://www.waterseepage.gov.hk/en/home/index.html>



Public may also refer to the BD's webpage below for the information on water seepage.

https://www.bd.gov.hk/en/safety-inspection/building-safety/index_bsi_seepage.html



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