London Leak Specialist

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Sample report, redacted. Client and property details have been withheld. Location: Streatham, SW16.

Client	Withheld
Property address	Withheld (SW16)

Visit 1: Leak detection report

Leak Detection Report

1. Reason for Attendance

We were called out to investigate damp patches on the living room wall behind the sofa, adjacent to the kitchen. The purpose of the visit was to inspect the accessible plumbing and heating systems, carry out appropriate testing, and identify any potential leaks that could be contributing to the reported dampness.

2. Visual Inspection

A visual inspection of the living room carpet and floor was carried out. At the time of inspection, these areas appeared dry, with no obvious signs of active water ingress.

The radiators within the property were also visually inspected. No visible signs of leakage were identified from the radiator bodies, valves, or accessible connections.

3. Heating System Investigation

The heating system was switched on, and a thermal imaging camera was used to trace the heating pipework.

The investigation established that the heating pipes run beneath the floor before dropping into the basement, where the pipework is accessible. The accessible heating pipework within the basement was inspected, and its routing was followed to establish its general direction through the property.

During the inspection, a very small drip was identified at a heating system drain-off point beneath the floor. The leak was extremely minor. The tenant also confirmed that they had not needed to top up the heating system pressure.

Based on the minimal amount of water observed, the location of the drain-off point, and the absence of any significant pressure loss reported by the tenant, this minor drip is unlikely to account for the damp patches in the living room. However, the drain-off point should be monitored and repaired as a precaution to prevent continued minor water loss.

4. Mains Water Pipework Inspection

The incoming mains water pipework was inspected within the basement. The pipe was traced from its entry point from the street, where it continues through the basement towards the kitchen.

No visible signs of leakage were identified on the accessible sections of the incoming mains water pipework during the inspection.

A cold water mains pressure test was also carried out. The system maintained a pressure reading of 2.5 bar for approximately 30 minutes, with no recorded pressure drop during the test period.

It should be noted that the tenant accidentally flushed the toilet during the test. Consequently, the test was carried out under limited usage conditions, and the result should be considered alongside the other findings rather than as absolute confirmation that no intermittent or concealed leak exists.

5. Bathroom Inspection

A visual inspection of the bathroom was undertaken to identify any obvious plumbing defects or potential sources of water ingress.

No apparent issues were identified during the inspection that could be directly linked to the damp patches in the living room.

6. Water Meter Monitoring Recommendation

Although the cold water mains pressure test held steady at 2.5 bar for approximately 30 minutes, a concealed or intermittent leak cannot be completely ruled out through this test alone.

The tenant was therefore advised to carry out a simple water meter monitoring check using the Thames Water meter.

The recommended procedure is as follows:

1. Ensure all taps and water-using appliances are switched off and that no water is being used anywhere in the property.

2. Take a clear photograph of the water meter reading before leaving the property.

3. On returning, ensure that no water has been used during the absence and take another photograph of the meter.

4. Compare the two readings to establish whether the meter has recorded any additional water consumption.

If the meter reading has increased despite no water being used, this may indicate a possible leak on the incoming mains water supply or elsewhere within the connected plumbing system. Further investigation would then be recommended.

7. Assessment of Possible Rising Damp or External Groundwater

Based on the findings available during the visit, no significant active plumbing leak was identified that could confidently explain the damp patches behind the living room sofa.

The external garden area raised a further possibility relating to water accumulation in the ground. It was reported that water may have limited means of draining away and could be accumulating beneath the stones and damp-proof course membrane.

If water is unable to drain away effectively, prolonged saturation of the ground adjacent to the property may contribute to dampness affecting the building fabric. However, this possibility was not conclusively established during the plumbing investigation.

The findings may therefore justify further investigation into the external ground conditions, drainage arrangements, and the condition and continuity of the property's damp-proof course.

It is important to distinguish between rising damp and moisture entering from saturated external ground. The current findings do not conclusively confirm either cause, and a dedicated damp and building-fabric assessment may be required to determine the underlying mechanism.

8. Conclusion

The investigation included visual inspections of the living room, radiators, accessible heating pipework, basement pipework, incoming mains water supply, and bathroom. Thermal imaging was also used to trace the heating pipework, and a cold water mains pressure test was completed.

The following findings were recorded:

- The living room carpet and floor appeared dry at the time of inspection.
- No visible leakage was identified from the radiators.
- A very minor drip was observed at a heating system drain-off point beneath the floor. This is considered unlikely to be the cause of the reported damp patches, although repair is recommended.
- No visible leakage was identified on the accessible incoming mains water pipework within the basement.
- The cold water mains pressure held at 2.5 bar for approximately 30 minutes.
- No obvious plumbing issues were identified during the bathroom inspection.
- Further water meter monitoring was recommended to help identify any possible intermittent or concealed mains water leak.

At the time of attendance, no significant plumbing leak was identified to account for the reported dampness. The cause therefore remains unconfirmed.

Further investigation of the external ground conditions, drainage, and damp-proof course may be appropriate, particularly if the recommended water meter monitoring does not indicate a potential mains water leak.

Limitations: This report records the findings from the accessible areas and tests carried out during the visit. Concealed pipework, intermittent leaks, and defects within the building fabric cannot be entirely ruled out without further investigation.

Visit 2: Repair and further leak detection

Leak Detection Report – Second Visit

Reason for Return Visit

A second visit was carried out to the property to complete the previously identified repair to the leaking heating system drain-off valve located on the pipework within the cellar. A further investigation was also required to locate a separate mains water leak reported by Thames Water, with an estimated water loss of approximately 6 litres per hour.

1. Heating System – Repair Works Completed

On arrival, attention was first given to the previously identified leaking drain-off valve on the heating system pipework in the cellar.

The following works were carried out:

- The central heating system was drained down to allow the repair to be undertaken safely.
- The defective section of pipework containing the leaking drain-off valve was cut out and removed.
- A new drain-off valve was installed.
- The heating system was refilled and brought back up to its normal operating pressure.
- All repaired connections were inspected and tested for leaks.
- Air was bled from the heating system to remove any trapped air.

Result: The repair was successful. No further leaks were identified from the repaired section of pipework, and the heating system was returned to operation and confirmed working.

2. Additional Finding – Boiler Pressure Relief Valve (PRV)

During the inspection and operation of the heating system, a further issue was identified with the boiler.

It was observed that the boiler was discharging water through the pressure relief valve (PRV) when the boiler was in operation.

This indicates a potential issue with the pressure relief valve or an associated component within the boiler/heating system.

Recommendation:

A suitably qualified Gas Safe registered heating engineer should attend to inspect the boiler and investigate the PRV discharge.

The engineer should establish the cause of the discharge and carry out any necessary repairs or component replacements to resolve the issue.

This should be investigated separately from the drain-off valve repair, which was completed successfully.

3. Mains Water Leak – Thames Water Report

The second issue involved an ongoing mains water leak reported by Thames Water, with an estimated loss of approximately 6 litres per hour.

An investigation was carried out to try to identify the source of the water loss.

Initial Visual Inspection

A visual inspection of the incoming mains water pipework was undertaken.

The majority of the visible incoming pipework was identified as older lead pipework transitioning into copper pipework. The copper pipework then disappears beneath the kitchen floor, where it continues towards the boiler and kitchen tap.

No visible signs of leakage were identified along the accessible sections of pipework.

Tracer Gas Investigation

As the suspected leak was believed to be located beneath the kitchen floor, the mains water system was drained down and charged with tracer gas to assist in identifying the location of any underground or concealed leakage.

The following checks were carried out:

- The cellar was thoroughly checked using the tracer gas detection equipment. No significant readings or evidence of escaping gas were identified.
- The kitchen floor area was subsequently scanned.
- Initial readings around the accessible kitchen floor area were minimal, with no clear indication of the leak location.
- Further investigation was undertaken by positioning the tracer gas detection wand beneath the kitchen units.

During this inspection, a slight but detectable tracer gas reading was identified beneath the kitchen unit, indicating that gas was escaping from the concealed pipework below the kitchen floor.

Although the reading was relatively low, it was sufficient to establish that there was a suspected leak in this location.

Finding: The tracer gas investigation identified evidence of escaping gas beneath the kitchen unit, indicating a likely leak on the concealed incoming mains water pipework beneath the kitchen floor. The exact defective section, pipe joint or valve could not be visually confirmed without gaining access.

4. Current Situation

Following the investigation, the mains water supply was turned back on and reinstated to the property.

The suspected leak remains concealed beneath the kitchen floor and requires further access to identify and rectify the defective pipework.

5. Recommended Further Works

Two possible repair options are recommended for consideration.

Option 1 – Localised Access and Repair

- Carefully lift and remove a section of the kitchen floorboard beneath the kitchen sink unit.

- Gain access to the concealed incoming mains water pipework.
- Locate the defective pipe section, joint or valve responsible for the leakage.
- Cut out and replace the defective section or component as required.
- Reinstate the water supply and carry out pressure and leakage tests to confirm the repair is successful.

Option 2 – Install a New Alternative Pipe Route

As an alternative to disturbing the existing concealed pipework beneath the kitchen floor, a new section of mains water pipework could potentially be installed.

This would involve:

- Running a new pipe from the cellar up into the kitchen.
- Routing the pipe behind the kitchen units, where practical.
- Concealing the new route behind the existing kitchen cabinetry and dishwasher area where possible.
- Connecting the new pipework back into the original incoming mains water supply.
- Isolating or abandoning the defective section of concealed pipework, as appropriate.
- Testing the new installation to confirm it is watertight and operating correctly.

This option may avoid the need to lift sections of the kitchen floor and disturb the existing flooring.

6. Conclusion

The second visit successfully resolved the previously identified leak on the central heating system drain-off valve. The heating system was refilled, vented, tested and returned to normal operation.

A separate issue was also identified with the boiler discharging water through its pressure relief valve when operating. A Gas Safe registered engineer is required to investigate and resolve this issue.

A further investigation was undertaken into the mains water loss reported by Thames Water. Tracer gas testing identified a slight but detectable escape beneath the kitchen sink unit, indicating a likely leak on the concealed mains water pipework beneath the kitchen floor.

Further access and repair works are required to resolve the mains water leak.

A quotation will be provided for both proposed repair options so that the most suitable and practical solution can be agreed with the tenant before proceeding.

Outstanding recommendations:

1. Arrange for a Gas Safe registered engineer to investigate the boiler PRV discharge.

2. Proceed with one of the proposed mains water pipework repair options.

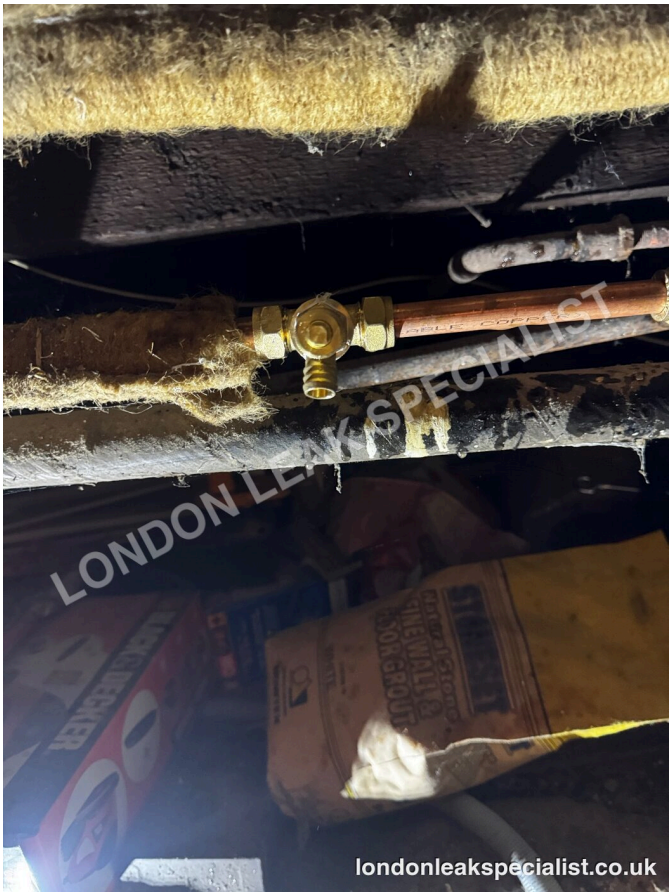
3. Carry out final testing following the repairs to confirm the leaks have been resolved.

Please note: The exact location and nature of the defective mains water pipework have not yet been visually confirmed, as the pipework remains concealed beneath the kitchen floor.

Photographs













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