London Leak Specialist

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Client: Withheld **Property address:** Withheld (Buckhurst Hill, IG9) **Inspection date:** 21 October 2026
Redacted sample report. Client name, address and contact details have been removed.

Leak Detection Report

Reason for Call-Out: Boiler pressure loss

1. Initial Inspection and Visual Assessment

We attended the property following a report of a pressure drop on the boiler's heating system. The property is currently undergoing refurbishment.

A visual inspection was carried out throughout the accessible areas of the property to identify any visible signs of water leakage, dampness or water damage.

It was established that only one radiator was connected to the heating system at the time of our attendance. Two additional pipework connections had been capped off incorrectly. However, there were no visible signs of water leakage, damp patches or water damage around the capped pipework or the connected radiator.

As no obvious source of leakage was identified during the initial inspection, further investigative testing was carried out to determine whether water was escaping from the concealed heating pipework beneath the floor screed.

2. Tracer Gas Testing

A tracer gas test was carried out on the heating pipework to investigate the possibility of a concealed leak beneath the floor screed.

The tracer gas equipment was operated continuously for approximately 1.5 hours while the pipework was monitored for any indication of escaping gas.

Throughout the testing period:

- The tracer gas detection equipment recorded zero readings, with no indication of escaping gas.
- The pressure gauge remained stable, with no observable pressure reduction during the test period.
- No evidence was identified to indicate a leak from the tested concealed pipework.

Based on the results obtained during this test, no detectable leak was identified within the tested heating pipework beneath the floor screed.

3. Thermal Imaging Inspection

The heating system was switched on, and a thermal imaging camera was used to investigate the temperature distribution across the accessible floor areas and help identify the route of the heating pipework.

The inspection was carried out to establish whether any abnormal heat patterns could indicate a potential leak or escaping heated water beneath the floors.

No identifiable thermal evidence of water loss was detected during the inspection. The thermal imaging results did not indicate a suspected leak within the areas examined.

4. Endoscopic Inspection Beneath Floorboards

An endoscopic camera was used to inspect accessible voids beneath sections of flooring where the floorboards could be lifted.

The purpose of this inspection was to identify any visible evidence of water leakage, dampness, wet insulation or moisture accumulation around the concealed pipework.

No visible wet patches, damp areas or other indications of active water leakage were identified within the accessible areas inspected.

Please note that this inspection was limited to the areas that could be accessed without further opening up the floors or surrounding structures.

5. Boiler Inspection

The boiler was visually inspected, including an examination of the accessible underside, to establish whether there were any visible signs of water escaping from the appliance or its associated connections.

No active dripping, visible water leakage or damp patches were identified beneath the boiler during the inspection.

However, a substantial build-up of limescale was observed inside the boiler. Although this was noted during the inspection, the presence of limescale alone does not confirm the cause of the reported pressure loss.

As no obvious external leakage was identified beneath the boiler, further checks were carried out on the pressure relief valve (PRV) discharge pipework located externally at the garden wall.

6. Pressure Relief Valve (PRV) Inspection and Findings

During the external inspection, a continuous stream of water was observed discharging from the pressure relief valve (PRV) outlet.

This was a significant finding, as the continuous discharge provides a direct explanation for the loss of pressure within the boiler's heating system.

The PRV is designed to discharge water when the system pressure exceeds its operating limits. If the valve fails to close correctly, or if its internal sealing mechanism is compromised, it can continue to release water even when discharge is no longer required.

The continuous flow observed at the external discharge indicates that water is being lost from the heating system through this outlet. This would result in a gradual reduction in system pressure and is consistent with the pressure loss reported at the property.

Based on the evidence observed on site, the PRV discharge is the identified cause of the boiler pressure loss, rather than a detectable leak from the concealed heating pipework investigated.

7. Conclusion

A comprehensive leak detection investigation was undertaken following reports of pressure loss from the boiler.

The investigation included:

- A visual inspection of the accessible property and heating pipework.
- An assessment of the connected radiator and incorrectly capped pipework.
- Approximately 1.5 hours of tracer gas testing.
- Monitoring of the tracer gas pressure gauge.
- Thermal imaging with the heating system operating.
- Endoscopic inspection beneath accessible floorboards.
- A visual inspection beneath the boiler.

- An external inspection of the PRV discharge outlet.

No detectable leak was identified within the tested concealed heating pipework. The tracer gas detector remained at zero, and the pressure gauge remained stable throughout the testing period. No visible signs of water damage, dampness or leakage were identified in the accessible areas inspected.

The decisive finding was the continuous stream of water discharging from the external PRV outlet. This provides a clear explanation for the ongoing loss of water from the heating system and the resulting boiler pressure drop.

The most likely cause of the reported pressure loss is the PRV continuously discharging water and failing to retain the system water. No evidence was found during the investigation to indicate that a concealed leak beneath the floor screed was responsible for the pressure loss.

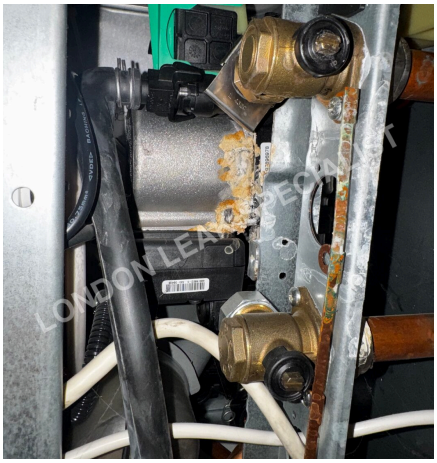
8. Recommendations

1. Repair or replace the PRV as required. The valve should be assessed by a suitably qualified heating engineer and replaced if it is not closing and sealing correctly.
2. Inspect the associated discharge pipework to ensure it is correctly installed and that there are no additional defects.
3. Refill and repressurise the heating system following the necessary remedial works, then check for leaks and confirm that the system maintains pressure.
4. Monitor the boiler pressure after the repair to establish whether the pressure loss has been resolved.
5. Review the incorrectly capped heating pipework and ensure the redundant connections are properly terminated as part of the ongoing refurbishment.

The concealed pipework was not identified as the source of the pressure loss during this investigation. If the system continues to lose pressure after the PRV issue has been rectified, further investigation may be required.

Outcome: PRV discharge identified as the cause of the reported pressure loss. No detectable concealed heating pipework leak found during the tests carried out.

Photographs



Photographs carry a London Leak Specialist watermark and have had location data removed.