

Fire system failure – investigation guidelines

Occasionally, fire systems will fail to deliver the expected flow and pressure for various reasons, such as:

- could be related to internal issues (most common issue)
- flow and pressure decreases over time
- issue in the City's water distribution network.

In order to provide useful advice, we need to gather relevant information which are outlined in the following steps:

Step 1

Before calling the Customer Contact Centre, you must have a response for the following:

- i. What is failing (e.g. hydrants or sprinklers)? Specify the location.

NOTE: Our servicing obligations are only up to your water meter/property boundary. If informed of internal problems, we will assess the City's water distribution network to check there are no relevant issues.

- ii. When was the last time the property passed fire testing compliance?
- iii. What is the flow and pressure you require for building compliance?
- iv. What is the current flow and pressure?

Most of this information should be on the report from the fire system tester. If you do not have this information, please contact your fire system tester before calling us.

Step 2

If the City (Water and Waste) is unable to identify any relevant issue, it is the customer's responsibility to undertake further investigation to clarify causes.

The following are important and should be undertaken as soon as possible by the fire system tester - and preferably at the same time that the failure is identified.

- i. The most effective test for clarity is to test pressure on the nearest street hydrant **AT THE SAME TIME** that they perform the internal flow test. This should include a range of pressures and flows such as 0L/s, 5L/s, 10L/s, 15L/s, 20 L/s.

- ii. If the pressures on the street hydrant is within guidelines , it is reasonable that the fire system tester undertake a diagnostic process of testing flow and pressure at various points internally (such as booster cabinets and taps) to determine the weakness point.
- iii. This may include reviewing any internal valves and fire-line valves, or assessing the condition of the property's internal network and fittings. This may also require plumber assistance.
- iv. They should also locate a copy of historical reports which can be helpful for further comparison to the current situation.

Locating the plumbing layout / connection points / fire lines / position of hydrants and sprinklers can also be helpful if we need to further assess hydraulic parameters.

At the end of this process, it still may be inconclusive regarding the nature of the problem. By undertaking this process though, you should have a thorough report as a starting point for the next step.

Step 3

If the reason for failure is still unclear, ask the fire system tester to send copies of their investigation results and historical reports to Water and Waste.

Water and Waste will review the reports based on our engineering judgement and our modelling results. We will review and assess whether we suspect it is due to a malfunction in Council's Network to be investigated; or whether the flow and pressures are within the expected range.

If the flow and pressures are within the expected range, we will expect the property owner to revise their on-lot hydraulic design based on the new realities.

If we are still unsure whether it is an internal or external problem, we will provide guidance regarding further investigative steps.

If you wish to report a problem, please follow the process outlined in Step 1 and call our Customer Contact Centre on 1300 000 928; and proceed to Step 2.

After completing the first two steps, please send investigation & historical reports to GCWPlanning@goldcoast.qld.gov.au