90% DRAFT - SUCCESSFUL ACTIVE FIRE PROTECTION MEASURES IN NEW ZEALAND

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Abstract*: This paper reports on research on successful active fire protection systems. The fire incidents with fire alarm activations that were assessed for the purpose of this study are derived*

reporting period. The incident reports for the assessed structure fire incidents were accessed at the local Fire Station.

The data collection methodology included the identification of those structure fire incident premises without a common name and/or with incomplete or no addresses. This was followed by checking all incident addresses against a Compliance Schedule database held at the local council to ascertain which premises had fire alarm systems in place at the time of the fire incident and what systems they were. Other information extracted from the Compliance Schedule database is the responsible alarm servicing agents. It was determined which incidents that were recorded as non-PFA premise incidents but occurred at a PFA premise because the alarm method/how the FS was called was not via a PFA. All incident reports were investigated in order to categorize them as
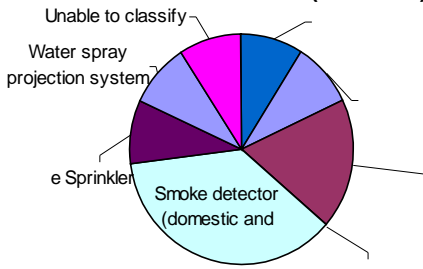
Figure 7 and Figure 8 show the SMS database recorded alarm/detector type distribution and the actual activated alarm/detector type distribution respectively. These figures are based on the entries of the non-PFA premises list.

Unable to classify

Water spray
projection system

e Sprinkler

Smoke detector
(domestic and
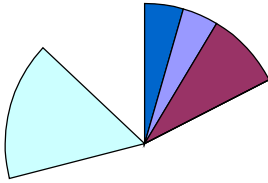
The predominant successful alarm and detection systems are smoke detector systems in those premises that are not connected to the NZFS. Due to the small sample size, the smoke detector category has not been separated into domestic smoke detectors, automatic smoke detection system or smoke detectors monitored by a security or monitoring firm. The SMS data show 58% smoke detection and 27% heat/thermal detection. After considering the SMS alarm performance group and performance code information and eliminating the alarms that did not actually activate, smoke detection increased to 71% and heat detection decreased to 9%. This confirms that the heat detection systems were less likely to activate than the smoke detection systems.

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