

## Case Study: Security Service Building Holding Cells & Office Areas

### Low Pressure Watermist



The building is a five storey general office and holding cell security service building, recently built in the vicinity of a busy city environment and required to meet the government's stringent BREEM rating.

In discussions with the building contractor, project consultant, and fire risk specialist, it was proposed to use a wet & dry low pressure watermist system to protect all areas within the building.

The system was designed to be a 'wet', closed frangible bulb operated system for all of the office and corridor areas. The holding cell areas are protected via early warning aspirating smoke detection which operates a solenoid actuated valve separating 'dry' pipe work and 'open' anti-ligature nozzles from the 'wet' monitored pipe work. This would release the zone monitoring pressure, activating the main watermist pump and thus discharging into the cell.

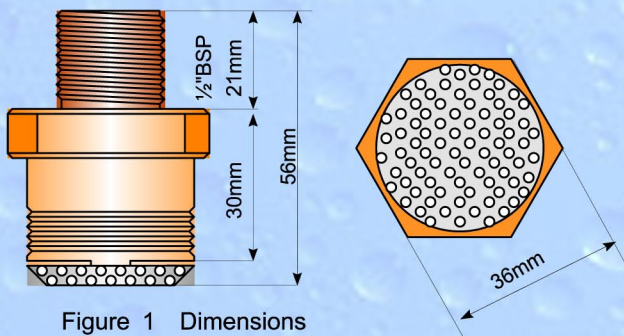


Figure 1 Dimensions

During these discussions with the building contractor, project consultant, and fire risk specialist, it was also decided to break each floor into zones so that each floor would be identified as such.

This allowed the removal of fire detection from the individual office areas, thus simplifying the design. Each floor and zoned area was identified from a flow switch within the pipe work and shown on the main site fire alarm control equipment.