



Project Title: Smart Design and Development of Vent Protector
Principal Investigator (PI): Sr Samson WONG
Project ID: CICR/01/20
Research Institution: Samson Wong & Associates Property Consultancy Ltd.
Subject Area: Green Construction
Duration: 12 months

Background

The potential risk of spreading infectious disease via defective drain pipes and dried traps has caused concern to the public since SARS; after which, an improved double U-shaped pipe, was designed and gradually adopted for use by the public. It was noticed that the open end of ventilating pipes might be a potential channel to allow spreading of germs between apartment units.

The combination of various environmental factors, including building orientation, roof design, wind speed and direction, etc., would allow germs to reach other apartment units by air turbulence.

The potential danger of spreading infectious disease via ventilating pipes has motivated the PI to study and develop a long-term strategy to enhance public hygiene and the living environment. The PI has developed a new device with a sterilization function to be installed at the end of existing ventilation pipes at roof or podium level.

Objectives

- ♦ To study the current Ordinance(s), Regulation(s), Code of Practices and Guidelines related to the study;
- ♦ To review common ventilating design of drainage systems adopted in Hong Kong;
- ♦ To identify potential risks and hazards induced by ventilating pipes;
- ♦ To list out possible solutions and to study and evaluate their effectiveness; and
- ♦ To produce a smart vent protector (SVP) with identified improvement areas.

Key Deliverables

- ♦ A Smart Vent Protector (SVP) with a reduction rate of 80% of germs with agreement from the Buildings Department on its use.

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