

## CROSS Safety Alert

# Smoke vents rendered inoperable by building work

This month we present a CROSS Safety Alert drawing attention to the safety risks associated with preventing the operation of smoke vents in buildings.

### Overview

Automatic opening vents (AOV) are provided as part of a fire safety smoke control system. In the event of a fire, an inoperable smoke vent poses a significant hazard. If smoke cannot be released from the building, it could hamper the escape of occupants and the ability of the fire and rescue service to fight the fire.

This Safety Alert highlights that, in many cases, AOVs can be indistinguishable from standard windows. This may lead to their inadvertent obstruction.

### Introduction

CROSS has received several reports of AOVs being made inoperable by building work, including when facade materials are being replaced.

AOVs are often designed to resemble regular windows for visual reasons. This may lead contractors to overlook their critical function. Even if the windows are recognised as being different from the standard, their important role in the fire safety strategy may not be perceived. Figure 2 shows a building elevation and illustrates the issue – some of the windows are AOVs but they are not easily identifiable.

*CROSS Safety Report 1347, Automatic Opening Vents not functional after two cladding remediations* describes two events where AOVs (styled to look like windows) were rendered inoperable for months after a cladding remediation. In the first case, contractors improperly disconnected the AOVs from their electrical components. In the second case, new cladding was screwed into the frame of the existing AOVs.

*CROSS Safety Report 1380, Automatic Opening Vent covered*



**FIGURE 1:** AOV in open position



**DURING BUILDING WORK THERE IS AN INCREASED LIKELIHOOD OF FIRE, PARTICULARLY IF COMBUSTIBLE MATERIALS ARE EXPOSED**

#### Who should read this alert?

- | Those responsible for the management of fire safety in buildings
- | Principal Accountable Persons and Accountable Persons
- | Designers
- | Principal designers
- | Principal contractors
- | Fire risk assessors
- | Those working in or on occupied buildings with automatic opening vents (including those designing and erecting scaffolding)

during remediation works involved a subcontractor being engaged to apply render as the final finish of the facade after remediation. Working on the exterior of the building, from scaffolding, the subcontractor's operatives took measures to protect the AOVs from the render that was to be applied. There may have been no sign or indication that the AOVs were not standard windows. The applied masking would have prevented the vents from opening in the event of a fire.

### Summary

Persons responsible for fire safety should ensure that the fire risk assessment is reviewed to reflect changes to risk created by building work. During building work there is an increased likelihood of fire, particularly if combustible materials are exposed. Elements of a building's fire safety system may not be recognised as critical by other trades or professions. Where such safety systems will be impacted by building work, a thorough review of the fire risk assessment and fire strategy must be undertaken, focusing on the current evacuation strategy. For instance, a stay-put approach may need to be reviewed.

Consideration should be given to interim control measures to mitigate any identified risks. Where mitigation measures remain inadequate to control the risk, consideration should be given as to whether the building remains safe to occupy. This is particularly relevant for buildings with combustible cladding during its removal work.

Where work is being undertaken on an existing building, the principal contractor (in conjunction with the person responsible for the management of the building's fire



**FIGURE 2:** Elevation of residential building with AOVs – the AOVs are indistinguishable from standard windows

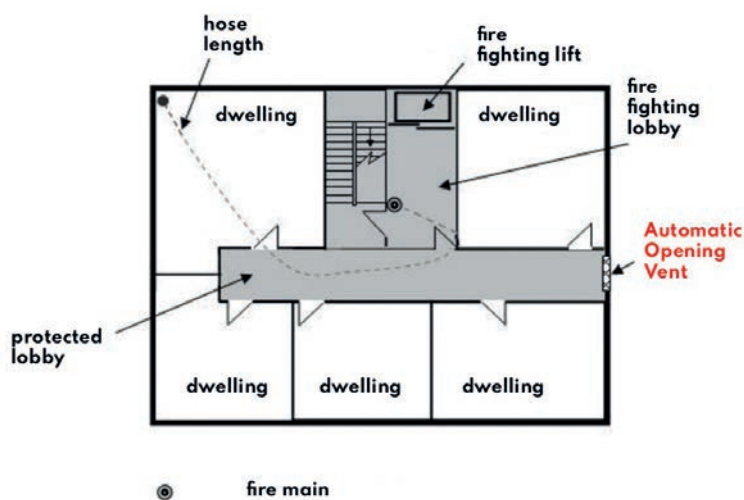
safety) should identify all AOVs and consideration should be given to providing temporary signage indicating that they are to be kept operable and clear from obstruction.

Consideration should also be given by industry to providing permanent, but discrete, signage on AOVs. This might read ‘Automatic Opening Vent – do not obstruct’. This need not interfere with the building’s architecture.

Improved training is recommended for all those in the construction industry who work onsite to raise awareness of the existence of AOVs and their fire safety function.

In England, the Responsible Person under *The Fire Safety (England) Regulations 2022 – Regulation 7* is also obligated to report faults in essential firefighting equipment for high-rise residential buildings. This includes when equipment is disabled.

The full CROSS Safety Alert, including links to guidance mentioned, is available on the CROSS website at [www.cross-safety.org/uk/safety-information/cross-safety-alert/smoke-vents-rendered-inoperable-building-work](http://www.cross-safety.org/uk/safety-information/cross-safety-alert/smoke-vents-rendered-inoperable-building-work).



**FIGURE 3:** Example of AOV positioning in residential building  
ADAPTED FROM PRACTICAL FIRE SAFETY GUIDANCE FOR EXISTING HIGH RISE DOMESTIC BUILDINGS FROM THE SCOTTISH GOVERNMENT. PUBLISHED FEBRUARY 2022. CONTAINS PUBLIC SECTOR INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE V3.0

### Related CROSS reports

- | Responsible person failed to react appropriately to a smoke control system failure (Report ID: 1237)
- | Combustible cladding material ignited during remediation work (Report ID: 1222)
- | Automatic Opening Vents not functional after two cladding remediations (Report ID: 1347)
- | Automatic Opening Vents covered during remediation works (Report ID: 1380)

### What is CROSS?

Collaborative Reporting for Safer Structures (CROSS) helps professionals to make structures safer by publishing safety information based on the reports it receives and information in the public domain.

CROSS operates internationally in the UK, US, and Australasia. All regions cover structural safety, while CROSS-UK also covers fire safety.



### How reporting to CROSS works

The secure and confidential safety reporting system allows professionals to share their experiences to help others.

Professionals can submit reports on safety issues related to buildings and other structures in the built environment. Reports typically relate to concerns, near misses or incidents. Find out more, including how to submit a safety report, at <https://bit.ly/cross-safety>. Your report will make a difference.



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