

Heads Up



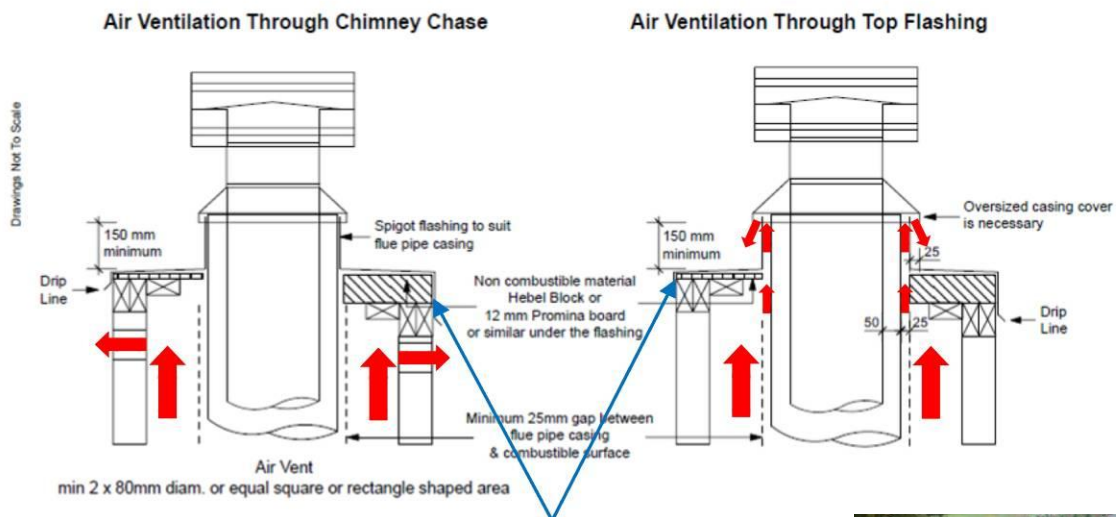
BACKGROUND

A chimney chase is a decorative surrounding that covers the metal flue of the chimney. In New Zealand modern construction typically includes timber framing clad with cement or other hard board which is plastered and painted for aesthetic effect. Recently a series of fires in chimney chases has drawn attention to incorrect design and construction methods.



Fireplace manufacturers installation instructions require chimney chases to include construction aspects including adequate ventilation (top and bottom), specified clearances and importantly, non-combustible material to be used under the flashing.

CHIMNEY CHASE AIR VENTILATION



Above - A manufacturer's specification requiring non-combustible material immediately under the flashing.

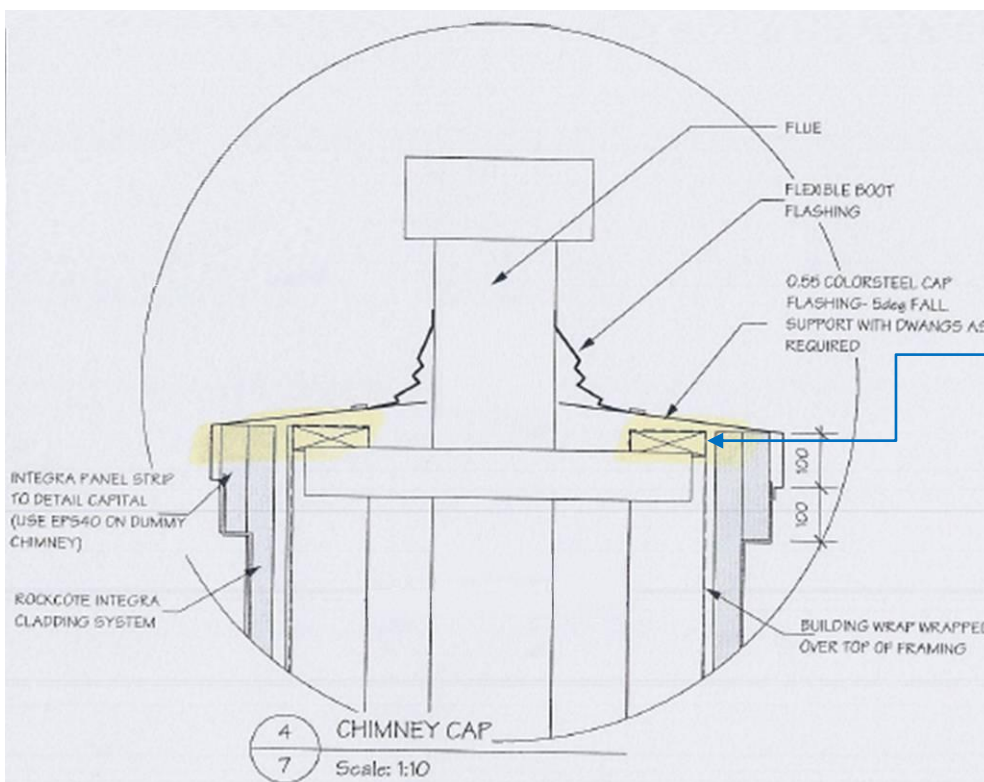
INCIDENTS DETAILS

The recent chimney chases involved in fires investigated by the New Zealand Fire Service have had timber framing directly under the flashing. The timber is subjected to prolonged heating during operation of the fireplace creating a condition (sometimes referred to as pyrophoric action) where the ignition temperature of the timber is reduced to well below usual ignition temperatures. Eventually a fire in the chimney chase will occur.





Resulting fires may enter the roof space (left) or drop down through the chimney chase (right) leading to significant fire spread and damage to the home.



In one case the fire investigator was able to confirm the chimney chase had been built to the architectural requirements. Non-combustible material was not specified beneath the flashing.

LESSONS LEARNED/RECOMMENDATIONS

These fires have highlighted the need for both the designers, inspectors and builders of chimney chases to be aware of the risk of fire where non-compliant materials or construction methods are used.

- Use non-combustible sheeting or material directly under the flashing
- Ensure adequate ventilation at the bottom and top of the chase to allow the conduction of heated air to ventilate externally
- Building inspectors should be vigilant for non-compliant designs and construction
- Acceptable solution C/AS1 Part9: Outbreak of fire requires chimney chases to be built to manufacturers specifications and should be rigorously adhered to (AS/NZS 2918).