Document type: Practice Note
Title: Structurally fixed cavity battens
Document number: AC2238
Version: 3

1. Background

E2/AS1 paragraph 9.1.8.1 states that where a drained and vented cavity is installed that:-

a) Cavity battens are fixed, by the cladding fixings, to the wall framing,
b) Claddings are fixed through the cavity battens into the wall framing, and
c) The drained cavity behind claddings, except in masonry veneer, is not vented at the top.

E2/AS1 table 24 lists the acceptable fixing methods for different profiles of timber weatherboards over a cavity to enable sufficient fixing penetration to secure the cladding and the batten into the framing. As an alternative solution, BRANZ have investigated structurally fixing the battens to the studs, which enables normal nail sizes to be used to fix the cladding.

If the cavity battens are structurally fixed to the structural frame, the lengths of the fixings do not have to increase for weatherboards installed over a cavity. This is because the structurally fixed battens become part of the frame or stud.

Under ES/AS1 the fixings for weatherboards over a cavity need to be at least 20 mm longer than for direct-fixed to give sufficient framing penetration. In general, as the length of the fixing is increased, there is an increase in the shank diameter; larger fixings (longer than 75 mm) cause splitting of the weatherboards. Structurally fixing the cavity battens to the frame can resolve this problem, as it will allow standard length fixings to be used.

Battens must be:

- Size and placement are subject to specific design
- Kiln dried (no requirement but this is industry norm)
- H3.2 treated
- positioned mid-width on the stud and over the wall underlay

Batten fixings must be:

- Fixings must be specifically designed
- Fixing types can be obtained from NZS3604 Table 4.3 (Durability)

2. References

New Zealand Building Code clause B2 Durability and E2 External Moisture
BRANZ Bulletin 582 (April 2015)
NZS3602
NZS3604