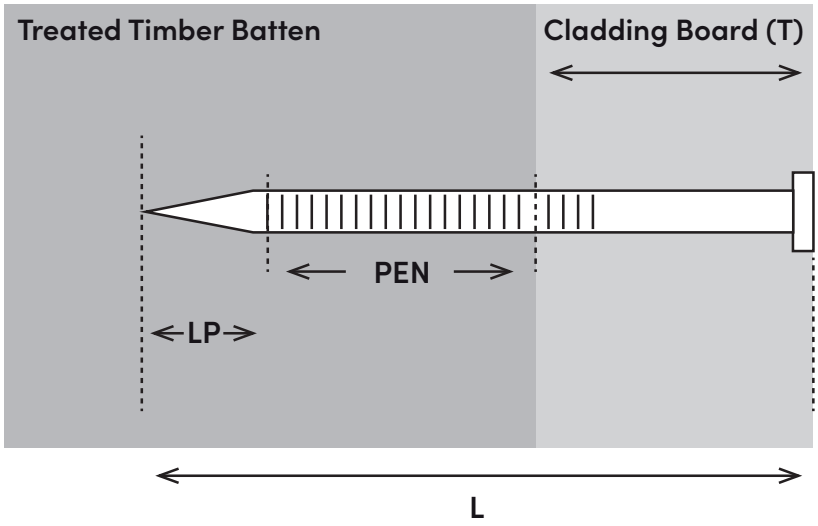
Brookridge

Guidance on Nail & Screw Sizing

Nail and screw sizing, and cladding boards to batten

A fastener must secure the cladding board firmly in position and provide adequate penetration into the support batten, ensuring structural safety, durability and performance - especially so, given the claddings exposure to wind, moisture, and thermal movement.

Eurocode 5 (EN 1995) provides guidance for fixing timber cladding to timber battens - in the diagram below, we detail the requirements for a situation of probable peak wind loads, up to 1.2 or 2.5kN/m2.



Key
T = cladding thickness
PEN = penetration depth into batten
LP = nominal length of fastener point
L = total fastener length

Penetration (PEN) should be a minimum of 19mm.

Normal length of fastening point (LP) should be 5mm for nails and 10mm for screws.

To calculate the total fastener length, please use the following equation:
T + PEN + LP = L (total fastener length)

Other general guidance on fixings

- Fixings must be stainless steel - suggest grade 304
- Ring shank nails are recommended with a minimum diameter of 2.3mm
- Screws recommended minimum diameter 4.0mm
- All fixings should fit flush with the cladding face and not puncture the surface
- For most species, a head twice the size of the diameter of the fixing is suggested

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