

This technical update provides additional guidance on the use of cavity trays and reveal closers. It is important that all workmanship carried out during construction is completed in accordance with the relevant tolerances.

Background

Dampness in cavity walls can be a major defect and very costly and disruptive to rectify, most damp ingress occurs over and around windows/door openings and roof abutments, however the correct installation of cavity trays and reveal closers can reduce risk and ensure homes covered are better built.

Details

Traditionally, it has been common practice to use roll damp course material as a cavity tray and this can be used to good effect. However, the profile must rise a minimum of 150mm within the cavity and should be shaped to promote the easy removal of mortar droppings. The tray should be positioned immediately above the opening and not several courses above.

Trays formed in this way, using roll DPC material, must have stop ends formed and these can be undertaken by folding the ends into the 'perp joint' of the outer leaf. Building into the inner leaf is required to provide support and the width of the material employed must be adequate to reach any supporting course that is not at a suitable height, the tray must extend beyond the lintel ends and the finishing point must not be less than 25mm beyond any vertical closer forming the reveal.

Preformed cavity trays may be used which due to their profile, can either be built into the inner leaf, or alternatively terminate against it and are therefore equally suitable for both timber frame and masonry construction. It is recommended that preformed cavity trays are used on all stepped or lower roof abutments in line with the Technical Manual requirements. Again stop ends must be used.

Whichever cavity tray construction is used weep holes are required and pre-formed 'weeps' should always be used, at maximum 900mm centres, in line with the requirements of the Technical Manual and additionally always be positioned at stop ends.

Reveal closers had traditionally been formed with rolled DPC material, however with today's thermal requirements, proprietary insulated reveal closers are commonly used. Of the many types available they all claim to act as a damp course. However, it is important to select an insulated model that is thermally efficient and addresses cold bridging. Closers should be tied in at appropriate centres, commencing tightly under the lintel and terminating at cill level. When a DPC or tray is also situated at cill level, such as one used with brick or stone cills, it must be ensured that the vertical DPC or closer extends and unites into the protective horizontal element.

Recommendations

Cavity trays

- 1) The minimum requirement is that cavity trays are installed over all external door and window openings including bay windows plus at roof abutments both horizontal and pitched.
- 2) Always ensure the cavity tray is correctly located directly over the window/door head.
- 3) Purpose made stepped cavity trays are best utilised for all pitched roof abutments.
- 4) Where natural stone/artificial stone heads are being used. It is advisable to double up the cavity trays, one below and one above the head, as per the Technical Manual requirements section 6

- External walls and ensure that the cavity insulation continues to cover behind the stone head.
- 5) Ensure weep holes are provided at each end of a horizontal cavity tray and at maximum 900mm centres as per the Technical Manual requirements. (See also below.)
 - 6) Ensure a weep hole is provided at the base of stepped cavity trays. (See also below.)
 - 7) Ensure the cavity trays are kept free of mortar droppings.
 - 8) For warranty purposes cavity trays, stop ends and weep holes should also be provided in render walls.
 - 9) All weep holes should be clear of any render in order to fulfil their function.

Reveal closers

- A) Always check products that claim to satisfy every requirement, do so.
- B) Always ensure the installation is in accordance with the manufacturers requirements
- C) Always ensure the reveal closer is insulated and protects against cold bridging, as required.
- D) Always ensure the reveal closer runs the full height of the reveal itself, with no gaps present.

References:

Technical Manual Section 6 External walls

BS 5628-3:2005 Code of practice for the use of masonry

BS 8000 – 3: 2001 Workmanship on building sites. Code of practice for masonry

BS 8215: 1991 Code of practice for design and installation of damp-proof courses in masonry construction

Building Research Establishment: Report 262 'Thermal insulation: avoiding risks'

"Timber Frame Construction" The Timber Research and Development Association (TRADA).

Every care was taken to ensure the information in this article was correct at the time of publication. Guidance provided does not replace the reader's professional judgement and any construction project should comply with the relevant Building Regulations or applicable technical standards. For the most up to date Premier Guarantee technical guidance please refer to your Risk Management Surveyor and the latest version of the [Premier Guarantee technical manual](#).