

LABSS INFORMATION PAPER INFOP37 - Version 1 – August 2022**D2.2.10 and ND2.2.7 Junctions****Information for verifiers****PURPOSE**

The purpose of this information paper is to outline the intent behind guidance clauses D2.2.10 and ND2.2.7 covering junctions.

The Technical Handbooks introduced from October 2019 included clarification on intent which has been further expanded within the Handbooks from 1 June 2022 which notes:

'Where a separating wall or floor or protected route of escape abuts a structure containing a cavity, a fire barrier or barriers should be installed in the cavity so as to extend the line, and maintain the fire resistance duration, of the wall or floor. This principle also applies where an external wall cladding system is constructed from materials having a European Classification A1 or A2 (other than between two leaves of masonry as described below). For example, in a rendered external thermally insulated cladding system where the insulation achieves European Classification B, C, D, E or F, a fire barrier or barriers should be provided on the line of the separating wall or floor. The barrier should extend from the wall/floor to the inner surface of the render (this may require an intumescent barrier within any drainage cavity that may be present).'

INTENT OF GUIDANCE CLAUSES

The additional clarification provided within the standards seeks to affirm the need to extend the line of separation or compartmentation through any adjoining cavity. The intent to 'extend the line' of separation or compartmentation means that any fire barrier installed within the cavity needs to attain the same level of fire performance of the adjacent separating/compartmenting element.

Any fire barrier installed in such a location is distinctly different from the role and performance requirement of a cavity barrier.

PERFORMANCE REQUIREMENTS

Based on the intent of the guidance, fire barriers in these locations, in order to 'extend the line', should achieve the same resistance of fire performance as the adjacent separating element with regards to integrity and insulation. A fire barrier does not normally provide any structural function therefore no load-bearing capacity performance is generally required.

SEPARATING/COMPARTMENT WALL CONSIDERATIONS

In terms of integrity and insulation requirements, a fire barrier either side of the junction which together provide an equivalent level of fire performance of the adjacent wall may be considered acceptable. Alternatively, a single fire barrier, placed centrally to the junction, providing the level of fire performance of the adjacent wall, also may be considered acceptable.

SEPARATING/COMPARTMENT FLOOR CONSIDERATIONS

In terms of integrity and insulation requirements, a single fire barrier providing the level of fire performance of the adjacent floor, positioned in line with the ceiling, in the cavity, may be considered acceptable.

SUMMARY

The information in this paper is considered to provide a robust backstop position which may allow for the efficient and consistent verification of junction detailing.

This paper outlines a conservative solution on the basis that the external wall will meet the necessary performance requirement and that barriers exist elsewhere to prevent smoke and fire entering and then spreading within a cavity, for example around any door or window opening.

The advice in this paper does not preclude any other solution, which would need to be fully justified by the applicant through the submission of test evidence or a technical assessment.

In this respect the verifier should have regard to reference, within the handbook guidance on independent third-party certification and accreditation, to the following publication – Guide to Undertaking Technical Assessments of Fire Performance of Construction Products Based on Fire Test Evidence (Passive Fire Protection Forum – 2021)