

KNOWLEDGE SHARE: 001

TITLE: MEP SERVICE POSITIONING AND SEPARATION WITHIN COMPARTMENT WALLS

BUILDING TYPE: ALL BUILDINGS

OVERVIEW OF THE PROBLEM

MEP (Mechanical, Electrical and Plumbing) service positioning and separation within compartment walls is rarely considered at early design stages making it difficult or impossible to install tested or certified penetration seals.

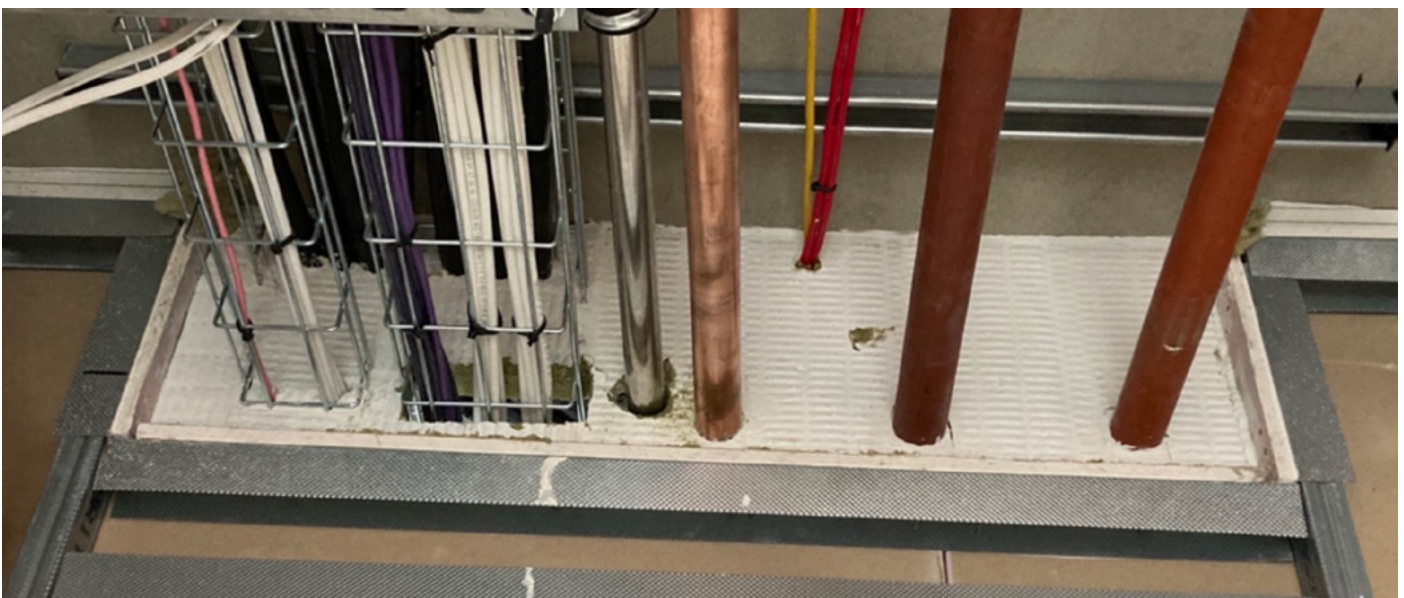


Figure 1: Mechanical and electrical services are too close together and too close to the aperture edge¹

WHY IS THIS A PROBLEM?

Service penetration seals must be installed in accordance with a tested or certified detail which will have defined minimum service and aperture edge separations. If there is no consideration of these minimum requirements during design, it will be difficult to specify and install a compliant service penetration detail. This means that services may need to be re-coordinated and this redesign may also have a knock-on effect on the architectural/structural spacing allocations.

RECOMMENDATIONS

It is strongly recommended that a modelling guide is developed to inform the design co-ordination process and guide the MEP modeller on how to place and separate services and size builders work holes. As far as practicable, this guide should not be specific to any penetration seal manufacturer to avoid limiting detail selection scope. It should also include information regarding general requirements related to hole separation, permissible wall types and service support distances.

Note 1. This image addresses the substantive issue. It is recognised that there are other design and installation issues apparent within this example.