

8 Acoustic design for electrical outlets/ sockets

Service penetrations e.g. power outlets/ sockets and IPS panels reduce the acoustic performance of walls especially when they are installed back-to-back. These need to be installed with an offset distance.

Sockets, switches, medical gas outlets and integrated plumbing systems should not be back-to-back in walls that have an acoustic rating.

For high insulation partitions, an acoustic backing box behind the outlets/ sockets may be necessary. Stood-off IPS panels and surface-fixed sockets and switches are preferable from an acoustic perspective, although these may not be preferred for other design reasons.

Avoid designing WC cisterns and waste pipes, etc within the cavity of a lightweight partition where a partition is between a “medium” and a “sensitive” space. The only scenario where this is allowed is where there is an ensuite room within a bedroom. In other situations if partitions are preferred, adequate acoustic insulation needs to be used to prevent sound transmission.

Similarly, if Medical Service Panels are recessed into an acoustic partition wall, maintain the acoustic wall sound insulation performance. Where necessary, install a suitable metal box in the wall cavity behind the panel and seal air-tight any penetrations in and around the box.