

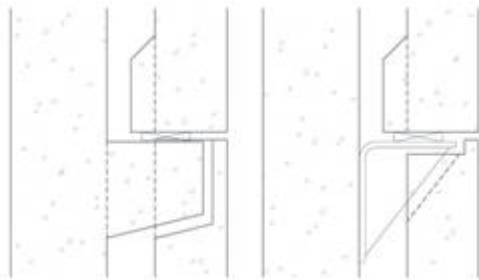
## Cladding on shear walls

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Usually, cladding is supported from columns or edge beams/slabs. However there are occasions where the supporting structure is a flat surface such as a shear wall or stair well wall. In this situation there are different problems, not least of which is the lack of access from inside the building.

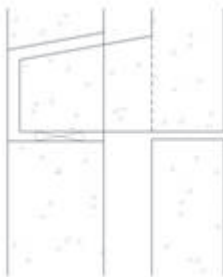
Assuming that the panel is of significant size and weight, there is only a limited range of solutions to the problem.

### Traditional supports:



These can take the form of an insitu corbel projecting from the face of the wall. The difficulty with this is that the top edge of the panel below the supported one must be significantly notched to accommodate the corbel. There is a similar (but less extreme) problem for a steel corbel bolted onto the wall.

### Holes in the wall:



If agreement can be achieved, it may be possible to form large openings in the wall. These will accept a traditional corbel on the rear face of the panel (concrete or steel). This has the advantage of allowing access from inside the wall to adjust shimming to achieve the correct level. The drawback is that the holes may need to be quite large to allow the corbel and possible restraint fixings as well.

### Purpose-made systems:



Diagram – Halfen Ltd

There are some systems available that are designed specifically to deal with the problem of cladding and shear walls.

The type shown consists of an upper section with an adjustable threaded rod, and a lower section cast into the panel. The fixing to the wall may be a cast-in socket, or heavy duty channel.

The design of the system is quite complex since wind loads are transferred from panel to panel and an iterative process is required. Suppliers provide software to deal with design.

It is important to consider lateral stability in the design as well as the vertical and horizontal loads.

If insulation is needed in the cavity, it is usual to pre-fix this to the wall rather than the panel.