

CASE HISTORY

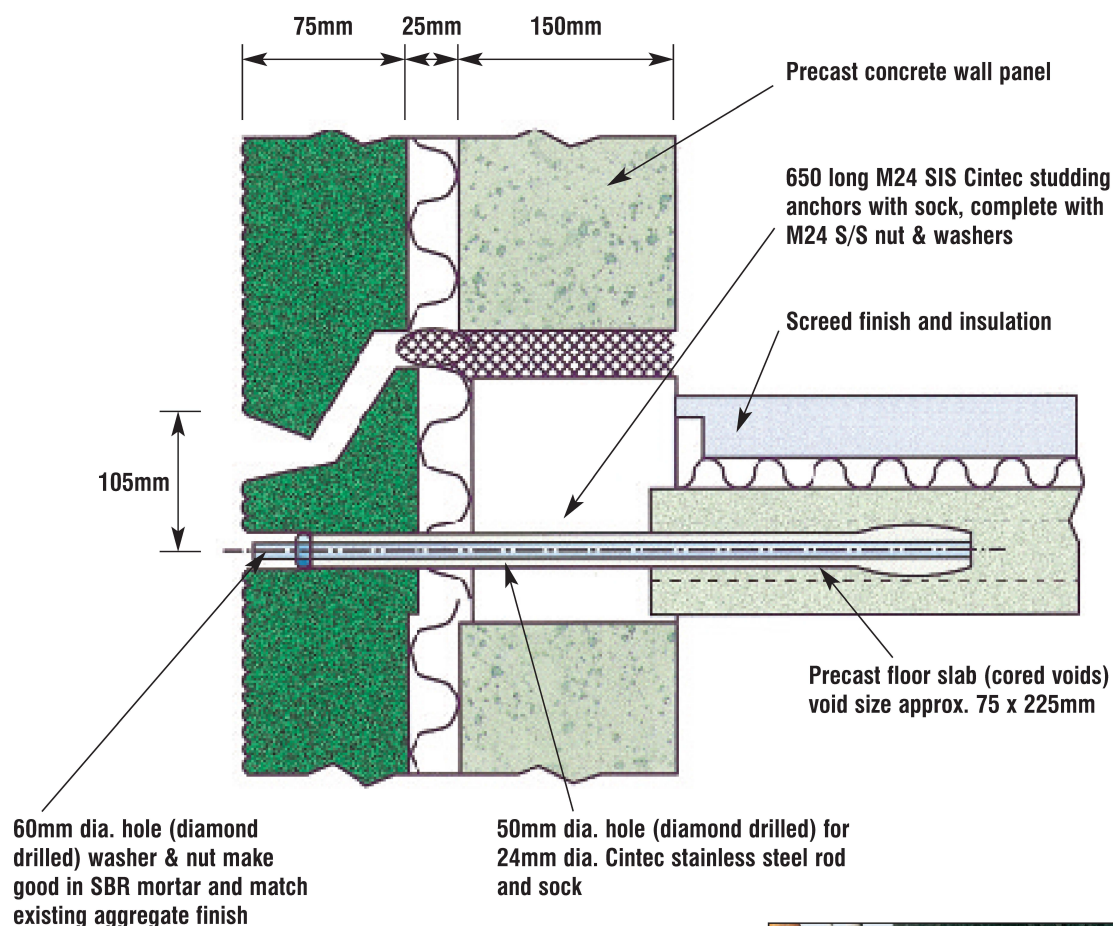
HIGH RISE REMEDIAL WORK AT FITZWARREN COURT, SALFORD, ENGLAND, U.K.



Fitzwarren Court is a large panel construction high rise, and over its life had suffered from the ingress of water which not only caused the normal structural damage and inconveniences, but also led to the deterioration of the panel fastenings.

Engineers Wright Mottershaw had experience with this type of structure elsewhere in the UK and proposed the Cintec System as being the most appropriate to fasten the external and inner skin to the hollow floor beams.

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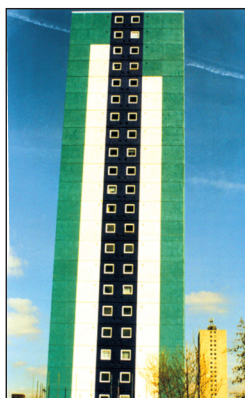


The design required a working load per anchor of 40kN and 75kN ultimate in tension. In tests during installation the anchors exceed these parameters.

The anchors were designed to inflate within the void of the floor beam and were inserted through a 50mm diameter hole in the outer and inner skins and into the end of the void - a horizontal slot approximately 60 mm x 150 mm with radius ends.

The anchor body was of high tensile stainless steel studding, capable of carrying the load, surrounded by a fabric sock to contain the cementitious grout. At the outer end, an exposed stud protruded by approximately 200 mm to facilitate the termination to the outer panel via a counter bored hole and heavy gauge large washer and nut.

Concrete repair techniques were used to finish and hide the bore hole.



Locating the floor beam voids presented some initial problems but these were resolved by site investigation by the contractors and engineers together and the time taken up by the problem was quickly reclaimed and the project finished ahead of schedule.

This unique system was chosen because of the engineering benefits, not least of which was the total control of the grout field; but also there was no need to require the occupants of the block to leave, because all the work could be done from the outside.

The problem of Fitzwarren Court are not uncommon, Cintec has since used this remedial repair system on other structures, both High and Low Rise.



Drilling



Anchor prior to injection



Injecting grout into anchor