

CASE HISTORY

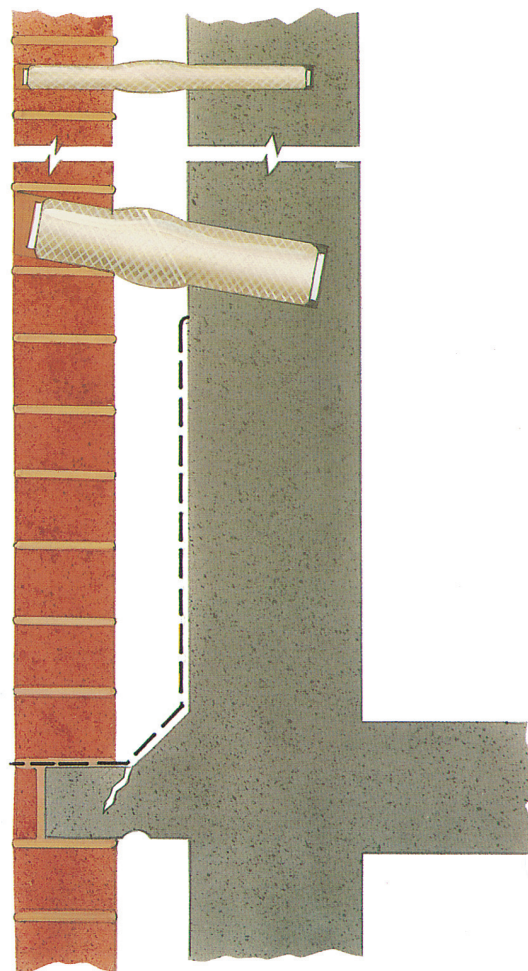
HIGH RISE APARTMENT BLOCKS, GLASGOW



Scottish Special Housing Association designed and supervised the renovation of 18 No. fifteen storey apartment blocks using Cintec corbel anchors and wall ties during 1984-1987. Typically the blocks were constructed of in-situ reinforced concrete inner walls, columns, beams and floors with brickwork cladding on the edge of the floor slab and supported by the concrete frame. The major defect was the deterioration of the concrete nib supporting the brickwork cladding with subsequent cracking and bowing of the external brickwork. These problems were caused by creep and shrinkage of the concrete frame.

The support provided by the concrete nib was replaced by the installation of Cintec corbel anchors at approximately 700mm centres at each floor level. The anchors were embedded approximately 90mm into the inner concrete leaf.

The corbel anchors were 30 x 30 x 3 SHS stainless steel sections with an external sock in a 60mm diameter core holes, which was filled with grout injected under pressure of approx. 3 bars. The external face was filled with a high-bond expanding mortar to match the existing brickwork. Cintec wall ties, 10 x 1 CHS stainless steel sections in a nominal 20mm diameter core hole, were used to restore the integrity of the brickwork panels to the required standard. Laboratory tests were undertaken on the compressive strength of the grout and the metallurgical and tensile properties of the stainless steel sections, whilst the installed anchors were checked using borescopes for deformed shape and adequacy of fixing.



Section showing nib detail
at floor level