

ADELAIDE HIGH SCHOOL SEISMIC UPGRADE



Adelaide High School (formerly Adelaide Boys' High School) is situated in parklands on Adelaide's West Terrace. It was built in the 1940s and is noted as "the first mainstream International style" building in Adelaide.

The building is noteworthy for its internal finishes as well as its external appearance. Heritage requirements for seismic strengthening in accordance with State Government policy would not allow the introduction of additional framing members and seemed an insuperable problem until Cintec Australasia was able to provide a *Cintec Solution*.

The building is of cavity brickwork with a 60 mm cavity between the two skins. Cintec designed a system which passes Cintec anchors down through the cavities and through holes in the intermediate slabs. An extra large Cintec sock expands laterally in the cavity allowing the anchors to form a reinforced band in the brickwork to provide the necessary framing action.

All anchors are made from Grade 304 stainless steel deformed bar and comprise 12 mm, 16 mm and 5x8 mm Multibar anchors. Cintec RAC8 remedial cavity ties are used adjacent to the vertical anchors to prevent the cavity widening during main anchor inflation and to ensure the bond is maintained between the anchor and the two leaves of brickwork.

Anchors are up to 12 metres long with a total length of more than 700 metres. In some locations pairs of anchors placed 200 mm apart were required to give the required steel section. The long anchors presented a particular design problem as stainless reinforcing bar is only available in lengths up to 6 metres and couplers would have not fitted in the very small holes (60 mm to coincide with wall cavities). Cintec's innovative Multibar anchor came to the rescue. The grout delivery tube is ringed with small diameter bars, saving space, and couplers do not require increased hole sizes.



Anchor being inserted in protection sleeve in cavity – sleeve later removed

Anchor sock expansion where bricks removed for inspection

