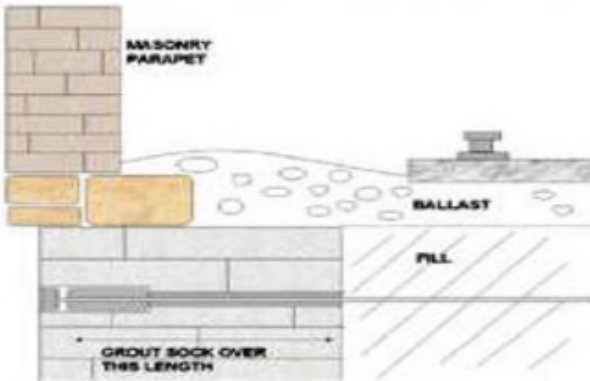


Killiecrackie Viaduct Tayside, Perthshire, Scotland, U.K.



Cross sectional view of 15ft three piece Cintec anchor



In 1998 Killiecrankie Viaduct was both repaired and strengthened. The work was intended to increase maximum track speed and accommodate Intercity trains travelling up to 125 mph. These improvements were part of an extensive program covering the entire length of the Highlands Railway from Perth to Inverness in Scotland.

Following the contours of Glen Garry, the curvature of the multi-arch structure added to the engineering challenge. Engineering consultants Scott Wilson of Glasgow assessed that strengthening would be required in order that the viaduct withstand the increased lateral forces being exerted by high speed trains.

The solution was provided in the form of 1.2" Cintec deformed rebar anchors in lengths between 3ft and 15ft. Installed horizontally under the full width of the viaduct, the anchors passed from the masonry spangrel wall through the springing vee joints to the opposing spandrel wall. Only the anchor sections located within the spandrel walls were socked and inflated with grout (see above). To increase tension values the anchors were installed in stepped bore holes allowing the sock to expand beyond the diameter of the inner bore hole. Other anchors were installed through the voussoir stones into the masonry arch barrels. In total 230 Cintec anchors were installed by the experienced drilling company Ritchies of Kilsyth.