



## Team effort provides solution to challenging project

The Harrow Road rail bridge in Rockdale, South East Sydney is a well known local landmark and traffic hotspot.

A recent upgrade project to strengthen the bridge abutments involved two of Sydneys leading contractors, Diacore and Supercut in a unique project collaboration which will undoubtedly lead to their further association on other major projects.



The project required the drilling of 22 x 175mm $\phi$  holes at angles of 11 ° and 13° up to 4 metres deep into each of the two massive brick and concrete abutment structures as preparation for grout stabilisation injection. This was made necessary by the increased loads associated with the replacement of the 1930s era riveted steel bridge beams with a precast & prestressed concrete deck.

An anecdotal story from an old timer watching the bridgework suggested that the steel beams were in fact left over 'splice sections' from the construction of the Sydney Harbour Bridge at around the same time Drilling on the abutments was preceded by an extensive 'Geofiz'

examination which indicated that drillers would encounter a combination of mass brick and concrete on the way to the sandstone bedrock.

Intensive planning took place between the Rockdale Council, Road Traffic Authority, Rail Corp and all involved

Contractors to ensure that there was the minimum of disruption to the lives of the local residents and also to the many thousands of vehicles which traverse the bridge underpass each day.

Drilling work had to take place between 10am and 3pm & 8pm to 1am every day for the duration of the project, which was anticipated to require 4 to 5 days. All road barriers and site establishments had to be totally removed at the end of each shift.

The combined resources of Diacore and Supercut provided that there would be four teams of drillers at work for each of the shifts worked with additional operators to cover rest breaks, site housekeeping & safety requirements.

Interestingly and probably predictably drilling progress encountered completely different conditions to that indicated by the 'Geofiz' survey. Not only brick and concrete but earth, gravel, sand, large sandstone, 'gibbers' coarse river pebble and basalt cobbles, combined with lengths of railway iron and evidence of the occasional wooden railway sleeper! A veritable cross section of 1930s railway construction archaeology

As a consequence core extraction became extremely 'interesting' and a number of creative techniques were developed, tried and tested. The project also provided something of a 'test bed' and comparison for the most effective combination of drilling equipment for the conditions. This was accompanied by an amount of good natured competition and camaraderie between the employees of the two companies. All of which ensured that this unusual, challenging and logistically demanding project was finished exactly on schedule and to the complete satisfaction of the obviously relieved client.