Bakewell Underpass

Australia, South Australia

Work / Activity 1

Construction methods / Auto-pushing

Description of the work :

The Bakewell Bridge Adelaide provides access via Henley Beach Road between the western suburbs and the City and is an important part of the metropolitan Adelaide arterial road network west of the City. As a 'Go Zone' bus route and a primary Cycling Route, Henley Beach Road is also an important route for both public transport and cycling. The 80-year-old Bakewell Bridge was nearing the end of its structural life and with its poor safety record was becoming increasingly costly to maintain and repair. The previous structure had vertical restrictions for both road and rail traffic and had suffered serious damage from a number of collisions by trucks. The bridge was closed for an extended period following a freight train derailment in 1999. Access for pedestrians and cyclists over the bridge is poor and there is no provision for people with a disability. This project involved the replacement of the existing overbridge on Henley Beach Road, passing over James Condon Drive and the railway tracks in Mile End, with an Underpass. Key to the project was minimal disruption to the railway network that carries TransAdelaide metropolitan tracks and the Australian Rail Track Corporation freight tracks.

Freyssinet mission :

Freyssinet Australia Pty Ltd involvement was to lift and launch the 3200 tonne railway bridge built offline on a temporary headstock 33.0 metres to its final position on the permanent abutment. The bridge was initially lifted using 20 No. 200 tonne jacks to strip the formwork and install the temporary slide bearings on the headstock. A duct cast into the end beams and a dead end cast on the opposite side of the railway tracks allowed 12 No. 15.2mm diameter strands to pass through each end beam. The launch system was tested prior to the shutdown weekend and the system worked as planned. Over the Easter weekend 2007, the railway tracks were cut and excavated allowing the Freyssinet team to launch the bridge into position late in the afternoon on Good Friday. The bridge was launched into position in just over five of the eight hours allowed for the operation. Once the bridge was in the final position, the bridge was lifted and the slide bearings were removed and the permanent bearings were set. The bridge was open for railway traffic in time for a normal scheduled railway service on Easter Tuesday 2007 when Adelaide returned to work.

Companie(s) :	McConnell Dowell Constructors
Owner :	Department of Transport, Energy and Infrastructure, SA
Subsidiary(ies) :	Freyssinet Australia
Beginning of works :	04/2007
End of works :	04/2007