



Description of the work :

Swan Island bridge is situated at the southern Victorian resort town of Queenscliff. The bridge is owned by the Department of Defence and is there only access on and off the island training facility. Deterioration of the bridge had been steadily increasing due to its close proximity to high chloride environment.

Freyssinet mission :

Freyssinet Australia was engaged to undertake Remedial Concrete Works including the removal of original concrete sacrificial deck using hydro demolition process. The design and installation of an impressed current ribbon anode system to the concrete deck soffit and kerb. Water anodes were placed onto the sea bed to protect the steel pile structure. Reinstatement of concrete profile and embedding of ribbon anodes was achieved using a dry spray gunite procedure. Marine grade coatings were used to protect the steel beam sections.

Because of the inability to close the bridge at any time all works needed to be completed using water access equipment such as barges and boats and submergible platforms.

Due to the sensitive nature and positioning of the bridge with the border of a marine park within meters of the project location an environmental management plan was produced. Water samples were taken and tested regularly. All of the removed concrete had to be contained and removed from site. Water from the hydro demolition needed to be contained, settled and then redistributed once the required turbidity had been achieved with the remaining sediment taken off site.

Despite the difficulties of working in an extreme tidal zone and the poor condition of the concrete the project was completed on time and without the need to close bridge traffic for any period.

Owner : Department of Defence
Engineering consultant : Spotless S & P Pty Ltd

Subsidiary(ies) : Freyssinet Australia

Beginning of works : 03/2005
End of works : 12/2005

