

## Bearing Replacement

M27 Roller Bearings - Phase 2



**FREYSSINET**  
SUSTAINABLE TECHNOLOGY

**Client**  
Highways Agency  
**Principle Contractor**  
Birse Civils Ltd  
**Value**  
£240,000  
**Contract Duration**  
8 weeks  
**Works Completed**  
April 2011

The M27 motorway is located in Hampshire and runs from Southampton to Portsmouth.

Freyssinet Ltd were appointed by Birse Civils Ltd to carry out the scheduled replacement of roller bearings to 3no overbridges near Southampton – Swanick Lane, Botley Road and Whitely Lane.

Bespoke temporary works were designed and installed by Freyssinet Ltd. The bridge deck was then jacked to release the load from the existing bearings, the existing roller bearings were then replaced with new mechanical bearings, which were designed and manufactured by Freyssinet Ltd's own in-house team.

As the main criteria for these works was to minimise the time period for traffic management on the M27, in order to expedite the replacement process, the existing upper and lower cast in plates were reused removing the curing process of new concrete & grout from the installation process. A Highways Agency Approved protective coating system was installed on these plates.

As the existing upper and lower cast in plates were found not be horizontal or parallel to each other, compound taper plates were manufactured to create horizontal and parallel bearing surfaces; these plates were installed to very tight tolerances to enable the accurate installation of the new mechanical bearings.

The works were completed ahead of a very tight programme, on budget and to the satisfaction of Birse Civils and the Highways Agency.



- 1 Bespoke temporary works were designed and installed by Freyssinet Ltd
- 2 Jacking the bridge deck to allow the bearings to be removed and replaced
- 3 New bearings being installed
- 4 New bearings in place

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