

M27 River Hamble Bridge – Strengthening & Bridge Upgrading 2008

EKSPAN were successful in securing the design and manufacture of 60 new stainless steel mechanical bearings. EKSPAN were also responsible for the temporary works design and bridge jacking. The works were successfully completed in September 2008.

The River Hamble Motorway Bridge was built in 1970 and was the UK's first Composite Motorway Bridge built on a design and build contract. Located near Bursledon Junction 8 on the M27 where the bridge crosses the river Hamble, between Southampton and Portsmouth. The bridge carries six lanes of traffic. **Dimensions/Specifications :** The bridge is approx 252m long & 32m wide and is constructed from fabricated beams with a concrete deck. The bridge is supported at each abutment, 2 main river piers and 20 mid columns have a total 60 mechanical bearings throughout the bridge.

JOB BRIEF

Design, Manufacture and Installation of 60 New Stainless Steel Mechanical Bearings

- Project Team
- Client: Highways Agency
- Design Consultants: Mott MacDonald
- Main Contractor: Jackson/Cemex JV
- Sub Contractor: EKSPAN Ltd.
- Completion Date: September 2008

EKSPAN MAIN SCOPE OF WORKS AND ENVIRONMENT CONDITION

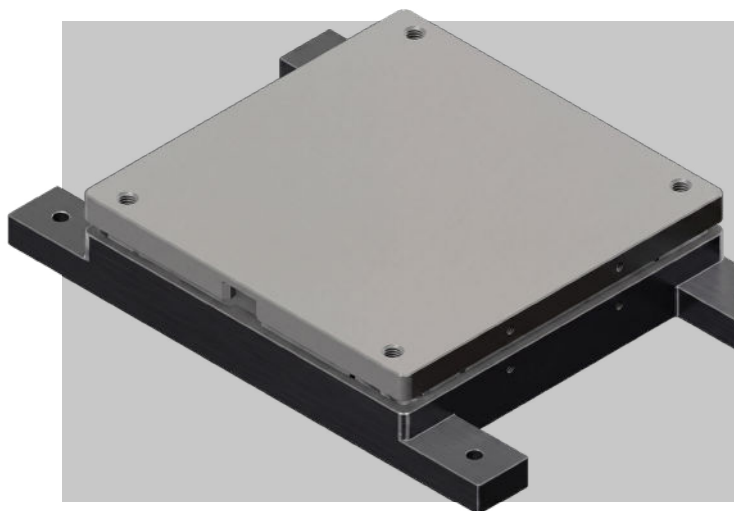
- Design/manufacture of 60 stainless steel bridge bearings
- Temporary works design
- Bridge jacking and monitoring – heavy support frames, special high load locking off jacks
- Removal of 60 old spherical bearings
- Installation of 60 new high load stainless steel EKSPAN bridge bearings
- Working on a tidal river
- M27 remained live throughout the works



M27 EKSPAN WORKS

The Highways Agency under the MAC 3 requested Mott MacDonald's to undertake a bridge assessment of the bridge's current structural capabilities and condition of the bridge bearings. The assessment concluded that all the bridge bearings required replacement and upgrading to take higher loads to meet BS5400 conditions. Additional strengthening works was also required to support the new high performance stainless steel bearings.

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