

Bill Boley

“Controlled Hydraulic Movement”

in action



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Complex motorway refurbishment project relies on Bill Boley jacking expertise

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load measuring project during major refurbishment work at junction 13 on the M4 in Berkshire, adjacent to Chieveley Services.

A crucial part of this refurbishment has involved replacing all the support piers without disrupting traffic flow on the M4 and A34 arteries. During this complex procedure, the motorway deck has been supported by twenty four 300

tonne jacks mounted in pairs on top of custom strain gauged 'Megashor Plus' structural support props in close proximity to the piers being demolished.

During the demolition and rebuild process it was vitally important for engineers to be aware of any movement in the foundations, which could have had an impact of the integrity of the overall bridge structure. Untoward changes in axial loads in the props are indicative of movement and the system was configured so that data could be remotely accessed on a regular basis. This allowed Bill Boley Ltd to apply any necessary corrective jacking loads to maintain integrity.



The strain gauged support structures act like giant load cells and provide axial load information via data loggers with built-in modems. This remote monitoring capability allows long-term load trends to be monitored remotely by Bill Boley Ltd. In addition the 'text message' alarm feature automatically warns designated recipients of any out-of tolerance load excursions. In addition to data from the strain gauged props, Bill Boley Ltd also provided positional data from their Geodetic monitoring system which continually monitored targets on the bridge structure.



Bill Boley Limited
Tel: 01543 371 361
Fax: 01543 371 955
www.billboley.co.uk
wboleev@billbolev.co.uk

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