



## STRUCTURAL JACKING AND TEMPORARY PROPPING SUPPORT WORKS

# PROJECTS

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## CONTRACT SERVICES - HIRE - SALES

### PROJECT DESCRIPTION

As part of a major construction repair project, Hydra Capsule were awarded the contract to hydraulically jack a 4-storey multi-buildings concrete structure over 250mm in one complete jacking stage.

The concrete floor had been cased approx -250.00mm lower than the specification, therefore Hydra Capsule were approached to offer a support and lifting solution to the complex jacking operation.

The works consisted of Hydra Capsules' synchronised jacking, computerised and monitoring system over 30 number long-stroke hydraulic jacks. Total load capacity of 1500 tonnes.



### PROJECT WORKS

Each jack was electronically controlled and had a 700 bar digital pressure transducer gauge and 300mm linear stroke displacement sensor to accurately lift the approx 40 metres by 20 metres structure within accuracy of 1.00mm at all jacking locations. The complete system was fed-back to Hydra Capsule's central control-point unit, which allowed all readings to be monitored and recorded in real-time.

The contract also required a complete design, supply and installation of a temporary propping system throughout the 4-storey structure to support the integral connections of the building whilst remedial



Prior to the lifting operations, all the supporting walls and columns were required to be diamond-cut / drilled free of the main structure. This consisted of installation of a complete steel prop arrangement, on each floor to suit the geographical of the building restraints. The 30 number jacks were then installed and fixed on the top of the prop. Which in turn, were pre-loaded for allowing hydro-cutting remedial works to commence and be completed.



### Client

Construction Contractor

### Type of Works

Hydraulic Jacking  
Synchronised Control Systems  
Temporary Support System(s)  
Temporary Support Design  
Consultancy

### Commence Date

November 2013

### Completion Date

December 2013



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