

## Post Tensioning to Multi Storey Car Park - Grand Arcade, Cambridge



### Balvac Installs Post Tensioning System to a Multi Storey Concrete Car Park

In July 2005 Byrne Brothers awarded Balvac the contract to supply, install and stress 130 tonnes of plastic coated strand, and 10,000 unbonded anchorages, for the construction of a new multi storey concrete car park in Cambridge. The car park forms a key part of a new shopping centre being developed by Cambridge City Council.

The unbonded system comprises individually greased strands, free to move in a plastic sheath during tensioning. Unbonded designs are flexible, more convenient to install and are appropriate for most slabs. Some slab areas were changed to bonded tendons due to a change in client requirements. Balvac was able to accommodate this at short notice, drawing on our supply chain arrangements for key components.

The main floor areas comprise of post tensioned beams in one direction, with post tensioned slabs in the other direction (as seen in the photographs above right). Balvac offer a full range of systems for bonded and unbonded tendons, making up a key

Principal Contractor: Bovis Lend Lease  
Concrete Frame: Byrne Brothers  
Consulting Engineer: Beattie Watkinson  
Programme: Sept 2005 to Aug 2006

part of the post tensioning packages available.

The benefits in using a post-tensioned slab solution are significant. Slab and beam depth are considerably reduced compared to reinforced concrete, allowing designers to reduce foundation costs and maximise building height. In addition, for car parks, improved durability of slabs is assured as a result of the post tensioning system applying compression to the concrete and thereby improving crack control.

Balvac is a member of the Post Tensioning Association, our systems are CARES approved, and our directly employed operatives hold the appropriate CSCS cards.

### Balvac

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