

CENTRAL VILLAGE MSCP LIVERPOOL

Client Merepark
Value £7.3m
Duration 55 weeks

McGee is currently constructing a new ten storey split level car park as part of the Central Village Scheme in the heart of Liverpool.

The 459 space multi storey car park is the first phase of the overall £160m development. The value of the works for McGee is £7.3m. The car park is being constructed for the operator Q Park to a high specification.

This project is being carried out under the JCT Design and Build 2005 form of contract with McGee being involved from the initial planning process through to the detailed design phase. Walsh Group is the Consulting Engineer for the project. Work commenced on site in June 2010 with a programmed duration of 55 weeks to completion.

Key Project Highlights

- A significant challenge of the project has been the design of the temporary works system to span the tunnel, minimising the imposed loads over the tunnel, whilst constructing the transfer beams and slab. An innovative falsework solution was devised using EFCO Shoring and Megashore Props, whilst the post tensioned transfer beams have been designed to be poured in 2 stages.
- This method of constructing Post Tension beams is a first in the UK



Works Undertaken

The project consists of; pad foundations and piled foundations and a 10 storey split level reinforced concrete frame structure, with post tensioned transfer beams, post tensioned slabs and 2 cores. The McGee scope of works includes the complete fit out of the car park, including; M&E works, lift installation, cladding, brickwork, surface finishes and the demolition of an existing footbridge.

The multi storey car park is being constructed on the site of the former, surface level Liverpool Central Railway Station car park.

The site has a number of challenging aspects such as; being bounded by 9m high walls to the north and south with properties directly behind, excavations through sandstone, an existing office block to the west, a tunnel directly below the site containing the live underground Mersey Rail train service and a side chamber directly under the line of columns. In addition, a full access road has to be maintained through the site 24 hours a day, 7 days a week allowing emergency vehicles access through to a tunnel portal to the east of the site, should the need arise.

There have been a number of interfaces with Network Rail in executing the works, both on the existing ground and within the tunnel. McGee has undertaken all the varied, Network Rail approval processes to allow the works to progress. This has included the installation of tunnel monitoring equipment, to measure any tunnel movements.

A portion of the transfer slab is in cantilever, due to the proximity of the tunnel below and the position of the boundary wall. This section of slab is supported by an insitu concrete truss arrangement, sat on piled foundations.

All elements of the groundworks, concrete frame and demolition have been self-executed by McGee with preferred contractors from our supply chain carrying out specialist items of work.