



# PRECAST SOLUTIONS

Est. 1973



**Car parks**  
Award Winning Precast Concrete Solutions

# Q Parks, Charles Street, Sheffield

**Precast Concrete:** Tarmac Precast

**Main Contractor:** J.F. Finnegan

**Engineer:** Capita Symonds Structures, Cheadle Hulme

**Architect:** Allies & Morrison, London

**PCE constructed this high specification multi-story car park incorporating an unusual “ramp free” design in the centre of the city amid multiple development sites.**

Charles Street Q Park is sited above a casino and retail complex, with in-situ concrete construction to level two and high quality precast concrete units forming the seven-storey car park which is accessed by a spiral roadway from street level.

PCE Ltd was appointed as specialist precast concrete contractor to erect almost 1,100 units that make up the internal structure of the car park and its decks.

The total management package involved substantial temporary works and control of two newly acquired tower cranes, a CTL 630 and CTL 400, which required meticulous supervision and radio communications to avoid conflict with three more tower cranes operating on neighbouring sites.

The construction features precast concrete column and beam construction for the frame with double-T units being used to form the main car park decks.

In all, 53 Columns, over 100 edge beams and 105 gable beams, nine special beams, 75 double boot beams were erected to form the frame, together with 170 wall panels, 437 double and single T units, 60 stair flights, 45 landings and 17 roof-stair slabs.

All precast elements were erected over the course of the 22 week contract, with a number of complex lifts required for a series of raked beams weighing up to almost 23 tonnes each and column units up to five storeys in height - around 13.5 metres.

Following installation, the precast concrete components were treated with high performance coatings to achieve a bright homogenous finish and mark out the roadways.

By expert management of the supply chain, PCE was able to meet targets and overcome problems of difficult access, complex lifting requirements and avoid conflict with neighbouring construction sites.

The completed building features an unusual aluminium cladding system and covers a footprint of some 30,000 sq feet. The high quality car park, operated by Q-Park, provides 520 vehicle spaces.

