



## Costco, Sunbury on Thames

### Client

Costco

Caunton supplied and erected the steelwork for a new Costco warehouse in Sunbury on Thames for main contractor Winvic Construction. The new store has a covered area of 13,006 square metres with a parking structure and tyre-centre located beneath the store, plus a bakery and food court. Caunton supplied over 1300 tonnes of steelwork for this major warehouse structure.

### Contractor

Winvic Construction

To accommodate the parking beneath, the main sales floor is raised on steel stilts, with the sales floor two metres-plus above ground level. The need for maximum floor space meant that internal columns supporting the roof were to be kept to a minimum. This resulted in a knock-on effect, as many of the columns, between the sales floor and the roof, did not line through with the columns supporting the sales floor. Hence most of the upper columns required transfer beams to carry the load through the structure. The roof framing was designed to be continuous, requiring haunched connections across the columns. The rafter connections experienced some substantial loading, resulting in the need for relatively deep haunches. The structural result is that deeper haunches would then attract increasing loading, which resulted in a change to the frame stiffness. Dialogue between Caunton's Design Department and the engineer Quattro resulted in a successful and economic "trade-off" between maximum connection capacity and frame stiffness.

### Architect

Broadway Malyan

### Engineer

Quattro Consult

The warehouses are designed to help small-to-medium-sized businesses reduce costs in purchasing for resale and for everyday business use. Caunton were pleased to be of service to such a successful company.

### Steel Tonnage

1,300 tonnes

**Caunton Engineering Ltd.**

Caunton House, 2 Coombe Road, Moorgreen Industrial Park, Newthorpe, Nottingham NG16 3SU

▲ T. 01773 531111 ▲ E. sales@caunton.co.uk ▲ W. www.caunton.co.uk