



The UK's No. 1 manufacturer of mezzanine floors

davicon
mezzanine floors

YOUR PLATFORM FOR FUTURE GROWTH



Case Study

Stoke Project for The Co-operative Pharmacy

Established back in 1844, The Co-operative Group is the UK's largest mutual retailer, owned by more than five million consumers. With core interests in food, pharmacy, financial and legal services, funerals, travel and electrical products, the group has some 120,000 employees and around 4,800 retail outlets.

Part of this powerful group, The Co-operative Pharmacy is the UK's third largest retail pharmacy chain. With 800 branches from the north of Scotland to the south of England – as well as in Wales and Northern Ireland – The Co-operative



Pharmacy dispenses over 55 million prescriptions a year. The company was the first to trial initiatives such as electronic prescriptions and pet medicines, as well as the first retailer in the UK to introduce Braille on own-label medicine packaging.

The Co-operative Pharmacy commissioned a major systems integrator, acting as general contractor to supply the entire internal logistics systems for its £16 million national distribution centre at Meir Park in Stoke-on-Trent. Built in less than a year, the highly automated facility is one of Europe's largest and most technologically advanced pharmaceutical facility.

At 17,000 square metres – with an additional 2,600 square metres of mezzanine – the warehouse is around four times the size of the company's former facility in nearby Wolstanton. The national distribution centre fulfils demand for The Co-operative Pharmacy's fastest-moving prescription medicines and OTC (over the counter) products, with each UK branch receiving a daily delivery.

Main Platform

- Platforms : 'L-shaped' platform maximum dimensions 53.8m x 13.811m plus 55.716m x 5.346m giving a total gross floor area of 1002m², including drop-down area as shown on the drawing.
- Construction Depth : Maximum construction depth = 482mm for open mesh decking.
- Height : Typical height = 4300mm to top of platform with lower level area at 3400mm to topside as indicated on the drawing.
- Decking : 25 x 2, 44/11 galvanised open mesh flooring as manufactured by Meiser.
- Baseplates : 300mm x 300mm x 12mm thick baseplates

DESIGN

- Loads : **Dead load** (mezzanine self weight) - 0.4 kN/m²,
: **Imposed load** - 4.0 kN/m² OR 7.0kN/m² as indicated on the drawing,
: We have assumed that the weight of any conveyors is included within the imposed load stated above,
: **Service load** - 0.25 kN/m² U.D.L
(We have made a nominal allowance for sprinklers and lighting supported from the underside of the floor).
- Column Loads : The maximum column load transmitted to the existing concrete ground floor slab is estimated to be 330kN (unfactored axial load).
- Column Grids : We have matched the column grids shown on Drawing No P07343-7. Maximum column grid in 4.0kN/m² area = 5.0m x 5.1m. Maximum column grid in 7.0kN/m² area = 7.0m x 6.26m (330kN maximum unfactored column load).
- Deflection : All steel members, including existing sections have been designed with a maximum deflection of L/360.
- Stability : This design is based upon full height cross-bracing being used to provide stability to the mezzanine floor from the applied horizontal and lateral loads.
- Fixings : All connections will be made using Grade 8.8 bolts with spring washers.
- Staircases : 1 No standard staircase, 4300mm high (to Part M of the UK Building Regulations), 1200mm wide, steel construction with chequerplate treads and notional 1200mm wide mid-landings, c/w standard 32mm O.D tubular twin railed handrail.
: 2 No standard staircase, 4300mm high (to Part M of the UK Building Regulations), 1200mm wide, steel construction with chequerplate treads and notional 2400mm wide mid-landings, c/w standard 32mm O.D tubular twin railed handrail..

ANCILLARY ITEMS

- Handrail : A total of 320 linear metres (box section, twin railed, c/w 150mm kicker fixed to the edge of the deck). Handrail is assumed to all open edges of the platform floor. Kicker is to be steel where specified with open-mesh decking.
- Bridge links : 9 No 'bridge links' across the drop-down area. 5 No 2.263m x 1.0m wide, 3 No 2.263m x 1.5m wide, and 1 No 2.263m x 2.5m wide, open mesh decking as detailed above. The quoted price includes 11 No, 500mm wide ships-type ladder, 900mm high, steel construction with chequerplate treads, c/w standard tubular single railed handrail providing access from the bridge into the drop-down area.
- Pallet Gates : 3 No "up-and-over" type pallet gate to suit 1200mm x 1000mm x 1000mm high pallet c/w wear plate.
- Infill between levels : 1.5mm thick Zintec plates, 900mm deep fixed between the structure at 4300mm and 3400mm level.

