

Broadway Plaza, Birmingham

6,000m² Enhanced Pedestrian Spaces and Car Park Waterproofing Solution

Project Description

Broadway Plaza is a multi-use facility based in Birmingham City centre; in use 24 hours a day, it houses an array of eateries, leisure and accommodation venues. The site, covers the listed Old Birmingham Children's hospital which in turn provided waterproofing challenges.

The Plaza had suffered severe water ingress through the main deck. IKO's appraisal highlighted the poor condition of the existing waterproofing system to the main plaza, walkways, balconies and car park.

Water ingress had caused fire retardant paint to peel from the metal structure in the car park, some rust to the metal structure and adhoc guttering had been added to divert water from within some of the accommodation blocks. Insufficient drainage was noted during large downpours and corrosion was visible to door thresholds of some of the outlets.

From exposing areas IKO found that the original waterproofing system and existing concrete screed to be saturated with no seal protecting the buildings or original sheet system sealed to the perimeter laps. Inconsistent levels meant that the Plaza would also suffer from standing water.



Solution and Installation

The existing waterproofing system was stripped to the concrete substrate and new drainage channels were introduced with falls directing water to the new high level drainage. IKO Permascreed was introduced to reduce the risk of gassing from the saturated screed. IKO Polimar FCS (Fast Curing System) Waterproofing System was introduced across the plaza terminating to brickwork, stanchions, lights and door thresholds. Exposed areas were treated with IKO FCS Balcony and Walkway System preserving the system while taking foot traffic. IKO Polimar FCS provided a feature on these details as well as a practical solution where construction provided a challenge.

The upper level of the car park's cracks and fistulas were treated to elevate further degrading. IKO Polimar Fillers and Levelling Mortar were

installed to take deflections from the surface. IKO Polimar FCS Walkway System was then applied.

Escalators were removed and staircases installed with an IKO Polimar FCS finish. Damaged kerbs, gutters, expansion joints or deck/substrate's were correctly fixed to ensure satisfactory installation of the new waterproofing system.

A number of trees required removing as roots were penetrating the waterproofing as a protective layer was never installed. This area was waterproofed with IKO Polimar FCS, backfilled using IKO enertherm XPS insulation board to raise the areas to the desired level followed by a geotextile membrane, coarse and fine aggregate, completed with the final paving.

Contractor: Rio Asphalt

Client: CBRE Ltd

Systems

- IKO Polimar FCS Waterproofing System
- IKO Polimar FCS Balcony & Walkway System
- IKO Permascreed

- IKO enertherm Insulation
- IKOpro Bridging Tape

IKO Guarantee

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