



## CASE STUDY - FLAT ROOF REFURBISHMENT—RETAIL

# CHESHIRE OAKS, ELLESMERE PORT



### The Project

Located off Junction 10 of the M53, Cheshire Oaks Designer Outlet is the largest outlet centre in the United Kingdom, with over 150 stores, restaurants and cafes, and was the first designer outlet village in Europe when it first opened in March 1995. It is run by McArthurGlen, and has a wide range of outlet stores run by large brands such as Bose, Levi's, Burberry, Calvin Klein and Tommy Hilfiger, to name a few.

The original roof coverings to the flat roof areas consisted of a PVC membrane over either 50mm PIR insulation or 80mm Mineral wool, laid on a polythene vapour check on profiled steel decking.

When the owners embarked on a roof refurbishment operation they invited roofing manufacturer Bauder to inspect and report on the roof's condition and make proposals for refurbishment.

Bauder carried out electronic moisture mapping surveys of the existing flat roofs to determine the location and extent of any water ingress. Based on this survey and refurbishment specification was developed and subsequently approved by the clients.

BBR Roofing were successful in securing the re-roofing contract, in part due to our long experience in carrying out re-roofing works on large shopping centres and retail estate nationwide.

**Project size:** 28,000m<sup>2</sup>

#### **Waterproofing system:**

- ◇ Bauder Karat
- ◇ KSA DUO 35
- ◇ 85mm BauderRock insulation
- ◇ 6mm Recovery board
- ◇ Bauder polythene AVCL



## The Re-roofing works

The Bauder re-roofing specification proposed an overlay of recovery boards, thermal insulation and bituminous waterproofing membranes for the majority of the roof areas, but with the areas which were identified by the moisture mapping as having suffered from water ingress being stripped out and made good with new materials.

### Site control

Cheshire Oaks is one of the busiest shopping centres in the country, with seven-day-a-week opening, and a principal requirement of the client was that the re-roofing works could not cause nuisance or disturbance to shoppers or shop staff. All of the business of the outlet stores was to continue normally during the works. It hardly needs to be said that safety of the public was a paramount consideration.

BBR Roofing set up a site compound for office, storage and welfare in a remote part of the centre, away from visitors, and allocated a dedicated and experienced Project Team to oversee and control the re-roofing work. This required very close and daily liaison with the client's representatives on site and with the staff of shop units directly beneath the programmed roofing work.

Weatherproofing the large amount of HAV equipment on the roofs required a close working relationship with M&E contractors, and as much of the material for the re-roofing was craned onto the roof the crane lifts had to be precisely co-ordinated with the shopping centre management, for both convenience and safety reasons.

### Completion

The re-roofing works were carried out in phases over a period of four years, which included Christmas periods as well as taking place during the later stage of the Covid pandemic, providing the flat roofs with a new charcoal black mineral felt waterproofing (Bauder Karat), and incorporating red mineral felt walkways to the numerous HAV plant items.

**Below:** Self-adhesive underlay was specified as part of a fire-safe re-roofing specification. Particular attention was paid to plant upstands.



**Right:** Red mineral felt walkways were introduced to facilitate maintenance staff access to HAV plant.



**Left:** Roofing materials were craned directly onto the roof

