

Case Study

Raising the roof at Bognor Regis Station

January 2020

Bognor Regis Station site dates from 1864, with the opening of a branch line to Bognor from Barnham Junction. The station was rebuilt in 1902 following a fire and renamed in 1930 when the seaside resort was awarded the appellation Bognor Regis by His Majesty King George V.

For the recent redevelopment of Bognor Regis town centre, improving the station environment was an important aspect of the redesign of public amenities, which run from the railway terminus towards the sea front.

Bognor Regis Town Council and Arun District Council funded £2.5m improvements to the station forecourt and building frontage, paying particular attention to the station's heritage features.

Twinfix were approached by Principal Contractor Keltbray to design, manufacture and install roof glazing to replace 540 original glass panels in the 5 lanterns above the concourse that were prone to leaks.

The main challenge for Keltbray was to help Network Rail find an alternative solution to replacing the roof-glazing without the use of scaffolding, therefore carrying out the task with minimal impact on the daily operation of the station and its passengers. Keltbray adopted a safe system using cherry pickers and scissor lift technology, while also preventing the station from being exposed to the elements.

Keltbray Rail Engineering & Civils Project Manager Dave Parker commented: "This was a new and exciting project with difficult access issues untried or tested by either party, which had its difficulties, but with good collaboration with all parties involved these challenges were overcome and the project was completed to a very high standard with no accidents or incidents."

The roof-glazing was replaced with 325 square metres of innovative Multi-Link-Panel NF (Non-Fragile) system, glazed with 6mm solid obscure Georgian wired effect polycarbonate.

The Multi-Link-Panel NF system installed at a vast number of stations across the UK, (including Aberdeen, Stirling and now Bognor Regis station) is an aluminium-framed modular rooflight system, designed with a patented fixing method that results in incredibly quick installation times – a real bonus when working with limited possession times. It is a cleverly designed and well-engineered roof-glazing concept that combines simplicity with sophistication, which has long been available as a non-fragile system that conforms to the HSE's approved drop test for non-fragility, ACR[M]001:2014.

The Georgian wired polycarbonate glazing combines the appearance of Georgian wired glass with all the material benefits of polycarbonate. Quite simply, it's a 6mm thick dimpled surface solid polycarbonate with the traditional look of Georgian wired glass.

It is the ideal material for station canopy glazing because the combination of its light weight of just 7.2kg/m², which is substantially less than the glass alternative, and impact resistance make it safer to install than the glass alternative. Being virtually unbreakable also negates future costly broken glazing replacement. It can withstand natural forces like severe wind, hail and snowstorms and absorbs vibrations caused by train movements without cracking, crazing or breaking. It also provides a low-maintenance, long-lasting rail roof solution, which is strong, corrosion-resistant and self-cleaning.

The successful roof re-glazing has provided Bognor Regis station with non-fragile, virtually unbreakable and attractive roofs, restored with a product that is in keeping with their heritage features.

Graham Richards, Network Rail Senior Asset Manager, Sussex Route commented "I am extremely impressed with the work carried out by

Twinfix at Bognor and it is great to see how this type of work can be done safely without affecting the passengers using the station. Well done to all involved."

