WEST KIRBY RAILWAY STATION

PROJECT: West Kirby Railway Station

CLIENT: Network Rail

SCOPE OF PROJECT: Supply and install replacement barrel vaults on a re-roof of the platform cover

PRODUCTS: em.vault barrel vaults

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Minimising disruption essential in restoration of railway canopy roof in live station environment

THE CHALLENGE

West Kirby railway station's 1930s platform canopy was long overdue for refurbishment. The original construction of concrete and timber, with integrated skylights, had begun to leak and spall pieces of concrete onto the platform. Whitesales were brought in by Briggs Amasco, Network Rail's roofing contractor, to design, manufacture and install a series of non-fragile rooflights for the 900 sq m replacement roof.

The greatest challenge was working in a live station environment, with no changes to train timetabling. Minimising disruption for staff and commuters was critical, and as such there would be just one access point to the roof. No edge protection was possible; every operative would need to be harnessed and work using a safety line system. The programme also demanded that we prefabricate our replacements before the existing skylights had been stripped away, and carry out installation using a strictly timed schedule.

THE SOLUTION

After our initial roof survey, we specified bespoke polycarbonate em.vault continuous barrel vault rooflights. They're compatible with the chosen Sika Liquid Plastics roofing system and have light transmission of up to 88%. The standard mill finish frame would keep costs low and blend with the canopy's concrete finish.

em.vaults offer one significant advantage over our GRP T-Vault rooflights: they can readily incorporate roof access. This was essential for future maintenance, so we specified four single-skin em.vault rooflights, one with manual opening supported by gas struts. Attending site visits before manufacturing commenced allowed us to take precise measurements, working around the extant skylights. This also enabled us to provide detailed curb-drawings to ensure correct construction. We also added external lateral bars to increase the em.vault's non-fragile rating to 'man-safe'.

THE BENEFITS

- Sleek, clear, continuous rooflights improve the canopy aesthetic from all angles
- Maximum light transmission enhances visibility for station users on the platform below
- Safe rooftop access provided, with additional safety bars
- Certified non-fragile to EN 14963: 2006: 1200 Joules, and ACR(M): 001: 2005 Class B
- Tight timetable possible with pre-manufacture and contractor technical support
- Completed on time and to budget, with zero disruption to passengers and staff

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