

Ormskirk FRP Footbridges over Rail



Details

Location	Doctors Footbridge, Aughton and Bridge Street Footbridge, Ormskirk
Description	Two 28m-span (2m x 2m) footbridges were installed over the rail network
Client	Lancashire County Council (to Network Rail requirements)
The challenge	The main challenge was to replace corroded Tubewright (tubular steel) footbridges in a short timescale / minimum possession time, with no additional dead load to the main supporting structure. An additional challenge was for the bridges to meet the fire performance requirements as stipulated by Network Rail (BS476-7, class 1 and EN13501-1 class C,s3-d0).
The solutions - where FRP composites are used and why	The whole structure was replaced with new FRP bridges, which were manufactured in Holland as single structures. The removal and installation work was completed over two weekends during September 2019.
Specific design details	The single piece infused structures were manufactured by Delft Infra Composites (Breukelen, NI). The hybridRED fire protection coating was supplied by Finnester Coatings Oy (Lahti, Finland), applied by roller at Delft IC and cured at room temperature.
Benefits	The project was successfully completed within the timescale allocated, requiring minimum possession time and limited road closures. No additional structural construction work was required on the supports - the lightweight nature of the composite FRP bridges meant that the existing abutments could support the new structure without requiring modification. The structures have both outdoor weathering resistance and are fire protected to the required standards with the single coat of hybridRED. Minimum maintenance of the finished coated structure will be required due to the nature of the coating technology. Any future damage due to e.g. heavy vandalism can be easily repaired by using the hybridRED technology.
Architect	Contractor - APB Group, Cheadle UK
Suppliers	Delft Infra Composites B.V., Breukelen NL
Further information	Martin Halpin at APB Group - www.apbgroup.co.uk

Contact