



## Colne Valley Viaduct

VolkerLaser was appointed to deliver waterproofing works on HS2's Colne Valley Viaduct, supporting Align JV as part of the wider infrastructure delivery programme in West London.

In October 2023, VolkerLaser began waterproofing HS2's Colne Valley Viaduct. At 3.4km long, it is the UK's longest rail bridge and will carry trains up to 200mph between London and Birmingham through West London's Colne Valley Regional Park.



The project began works on the viaduct's two verges: two-metre-wide corridors on either side of the main deck that will eventually serve as emergency and maintenance access routes. Our specialist team used DGH150 diamond grinders to achieve a U4 finish on the precast slabs, upstand and stitch joint, providing the necessary surface preparation ahead of waterproofing. Earth bond connectors were sealed, segment joints were detailed, and the verge slabs were then treated with Par1 Primer and GCP Eliminator One-Coat.

As works progressed, two additional gangs were mobilised to prepare the nine-metre-wide main deck. Surface preparation was carried out using a ride-on shot blaster, followed by application of Par1 Primer and Eliminator to the precast slabs and kerb base, including a complex tooth joint detail.

On-site specialists also installed Z-Primer to the drainage gullies before overcoating with GCP Eliminator.

The team worked closely with other contractors to minimise disruption, coordinating activities with those constructing walkways, casting concrete elements, and installing acoustic barriers such as four-metre-high transparent panels that preserve views across the regional park.

The waterproofing solution delivered by VolkerLaser directly supports the viaduct's long-term durability and sustainability targets. Designed with a 120-year lifespan, the structure prioritises environmental performance through reduced concrete and steel usage, low-maintenance systems, and efficient construction practices.

Over the course of the project, our specialist team applied more than 50,000m<sup>2</sup> of GCP Eliminator waterproofing across the bridge's verges and central deck, completing all works by the end of May 2025.

