

Reinforced spray concrete

Longham Wood pedestrian subway, Kent

Client

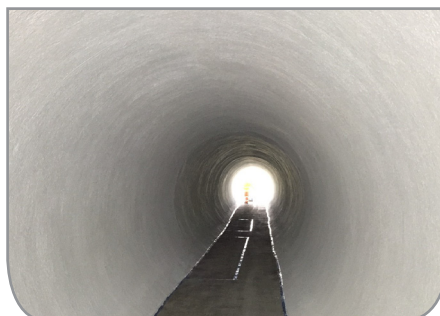
Highways England

Principal Contractor

Osborne

Works Completed

February 2020



Longham Wood is a pedestrian subway which runs under the M20 Motorway at Junction 8 near Maidstone, Kent. It measures 54m long with a radial diameter of 9 metres.

Significant water ingress had resulted in extreme corrosion to the existing Amco corrugated steel structure. The brief was to waterproof, strengthen and reinstate the structural integrity of the subway. Freyssinet's proposed solution was to carry out the repairs with the addition of a reinforced concrete sprayed lining to the subway walls.

The surface area was prepared by high pressure water jetting the existing steel sheeting followed by the installation of Freyssinet-designed brackets to the existing corrugated retaining bolts, which were designed specifically to ensure the correct positioning of the reinforced mesh.

The A393 welded mesh was then installed to the brackets to the full perimeter of the structure before 150mm Weber Dry Spray was applied in multiple layers to ensure overlapped day joints and provide total water tightness.

To minimise water ingress at the entrance of the subway, the floor levels and ramps were raised by an additional 75mm.

Piano wires were used longitudinally at 150mm spacing to the full circumference as a guide for the radial profile. An exceptional finish was achieved by Freyssinet operatives following the existing profile.

Following the curing of Gunitite, a white base coat of 551 Primer was applied followed by two coats of Sikagard 550W and finally two coats of Sikagard 850 anti-graffiti paint.