CASE STUDY

SLOPES & EMBANKMENTS

Chiltern Tunnel Headwall,
Buckinghamshire - UK

OVERVIEW >>>>

HS2 launched its first giant tunnelling machines after completing the South Portal of the Chiltern tunnel, a milestone that began the TBMs' multi-year drive. Minova played a key role in preparing the 17 m high headwall through which the machines broke through, helping to secure the structure and protect the tunnel start.

The headwall breakthrough marked the first major step toward transforming rail travel by enabling a faster, more reliable and lower-carbon route, and it allowed tunnelling to proceed safely and on schedule for the benefit of millions of future passengers.

Customer: KV Keller Ltd & VSL International Joint Venture

Project Duration: 05/2020-07/2020

Products Offered:
32mm ATB Galvanised Soil Nails
38mm GFRP Tendons
Head Plates
Structural Mesh
GFRP Mesh Panels
Drapery Netting
Erosion Control Matting
Testing Services

Applications:
Ground Control
Slope Stablisation & Embankments

SOLUTION >>>>

Minova supplied ground support to the headwall, delivering more than 636 soil nails; some up to 20 m long — using steel and glass-fibre-reinforced polymer tendons to provide lateral confinement and long-term stability. Structural mesh and shotcrete were applied to the wall surface for immediate support, while Minova's GFRP Powermesh panels acted as primary concrete reinforcement and permitted the TBMs to drill through without damage.

These measures held the ground and wall surface in place during breakthrough and ensured the headwall met demanding performance and durability requirements for the tunnelling works.

PRO-190226-EN-ENE

CONTACT OUR TEAM

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