

PRESTONS ROAD FLYOVER
LONDON, EAST LONDON, UNITED KINGDOM**Basal Reinforcement****Problem**

The Prestons Road Flyover carries the East India Dock Link highway over a grade-separated junction built over the line of the Blackwall Tunnel. The line of the highway lies between the cast-iron lined, bored tunnel and the brick-built cut-and-cover approaches. Potential differential movement of the tunnel due to surcharge loading at that point was unacceptable.

The typical geology of the London Docklands comprises a variable depth of made ground overlying compressible alluvial materials which in turn overlie the London Clay. The design challenge was increased by the constraints of the grade separation geometry and the proximity of an elevated section of the Docklands Light Railway.

Solution

The avoidance of surcharge on the tunnel and the potential for differential movement were resolved by supporting the approach ramps on piles. The embankment loads were transferred from the ramp fill to the piles by a granular mattress reinforced with high-strength Paralink geosynthetic reinforcing materials.

Additional economy was achieved by the use of lightweight pulverised fuel ash as the fill material. The durability of Paralink in these chemically aggressive conditions made it an obvious choice for the application.

Client: London Docklands development**Designer / Consultant:** Mott MacDonald**Contractor:** Edmund Nuttall (Now BAM Nuttall)**Products used (Qty.)****Date of construction:** 05/1990 - 07/1993[Google Maps](#)[Google Earth](#)

Paralink placed in two direction over the pile caps



PFA was used as fill to create the embankment



Preston Road Flyover - a soil reinforced wall over Paralink



Backfilling in operation over the Paralink LTP