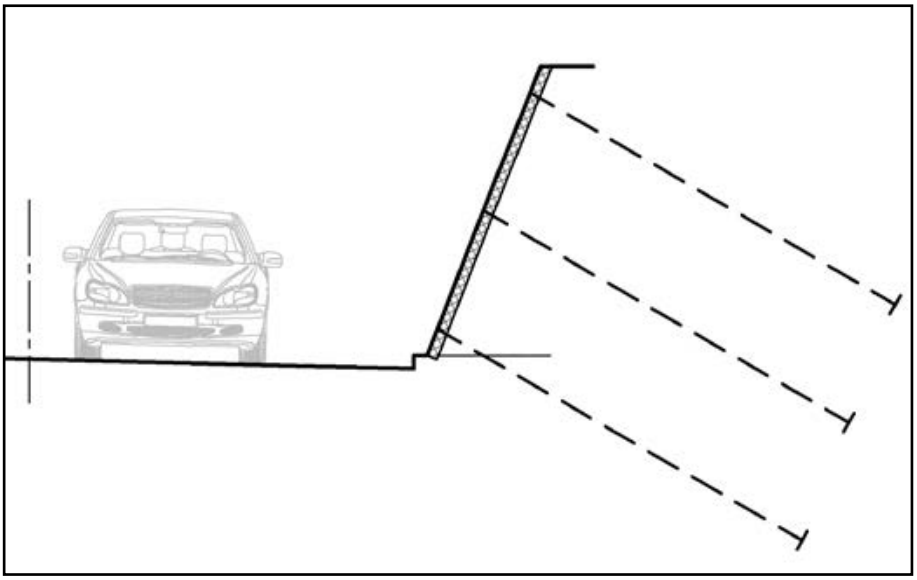
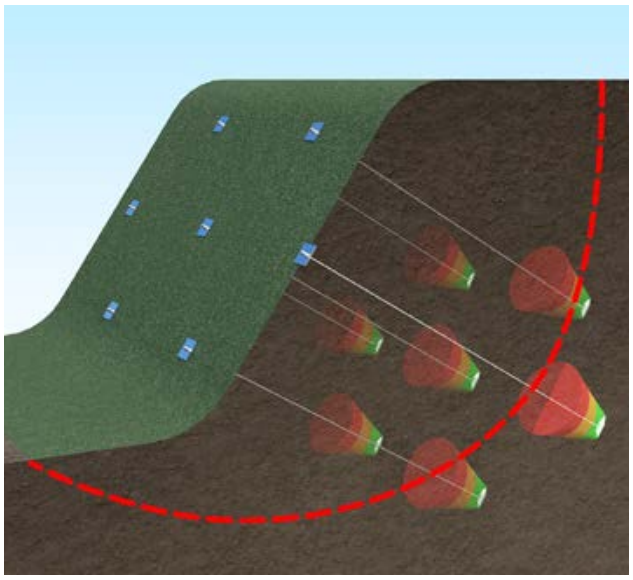
TOPBOND PLC Group | PLATIPUS EARTH ANCHORING SYSTEMS

LITTLE PRESTON, KENT

OVERVIEW

A new access road was to be created as part of a construction scheme for an existing industrial estate adjacent to the M20 J5. The new road required the widening of an existing slope to create space for construction, whilst minimising encroachment on the surrounding ancient woodland. The slope face stood 3.5m high along a 35m stretch of road. A king post wall had been suggested; however, this would encroach further on the woodland and incur greater costs. The decision was taken to utilise Percussion Driven Earth Anchors (PDEA®), geotextile matting, and Plati-Drain® to ensure the future safety and stability of the slope. As this solution was required to last the expected lifetime of the industrial estate a permanent solution was specified.





THE SOLUTION

The first stage of this project involved reprofiling the slope to the required 70° angle, while working in bays no greater than 15m to ensure the temporary stability of the slope. Next trenches were created at the crest and toe to secure the geotextile matting. During this stage 29 Platipus Plati-Drains® were driven at 5° above horizontal to provide drainage at the base of the slope, preventing potential issues owing to pore water pressure. A total of 69 S8 anchors were driven through the geotextile matting into the slope face at 1.2m intervals to a depth of 4m, before being loadlocked to a working load of 35kN. This design allowed vegetation to return to the slope, restoring its appearance and biodiversity while providing a safe and cost-effective solution.

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