

A45 PICKFORD GREEN INTERCHANGE COVENTRY, WARWICKSHIRE, UNITED KINGDOM

Basal Reinforcement

Problem

Pickford Green Interchange is a proposed highway interchange on the A45, west of Coventry. It is planned to be constructed to facilitate future developments including up to 2,400 new homes and a new business area of approximately 15ha with a mix of R&D, light industrial and distribution uses across the site. The new grade-separated interchange will include the construction of a new overbridge, replacing two previously existing junctions at the site.

The northern approach embankment was proposed to be constructed over an area of soft ground which would likely see significant differential settlement across the constructed embankment unless basal reinforcement was introduced to mitigate this.

Solution

Throughout 2022 Maccaferri worked closely with project designers at Pell Frischmann to come up with a design solution using Paralink 600 high-strength geogrid to span the area of soft ground and help mitigate the potential for differential settlement to cause issues within the newly constructed embankment.

In September 2022 Maccaferri supplied contractors Breheny Civil Engineering Ltd with 5,600m² of Paralink 600, which was installed in a fanned-out shape covering the area of soft ground whilst also incorporating the anchor bond length of geogrid within the footprint of the proposed new embankment.

Paralink geogrids are unique planar structures consisting of a monoaxial array of composite geosynthetic strips. Every single longitudinal strip has a core of high-tenacity polyester yarn tendons encased in a polyethylene sheath; the single strips are connected by non-resisting cross-laid polyethylene strips that give a grid-like shape to the composite.

They are amongst the most tried and tested geogrids in the world offering BBA certified 120-year design life and high performance. The incredibly tough polyethylene sheath is resistant to physical, chemical and biological conditions found in reinforced soil structures. Paralink is manufactured in Yorkshire, UK.

Client: Pell Frischmann / Breheny Civil Engineering Ltd

Designer / Consultant: Pell Frischmann

Contractor: Breheny Civil Engineering Ltd

Products used (Qty.)

- Polymeric Geomembranes 5600m²

Date of construction: 09/2022 - 09/2022

[Google Maps](#)

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Paralink being installed within the embankment footprint.



Granular fill being distributed over the Paralink basal layer.