

## COLLEY LANE SOUTHERN ACCESS ROAD BRIDGEWATER, SOMERSET, SOMERSET, UNITED KINGDOM

### Construction over Voids

#### Problem

The Colley Lane Southern Access Road (CLSAR) is a new carriageway in Bridgwater to provide access into the Colley Lane Industrial Estate from the South. The £18.4m Colley Lane Southern Access Road (CLSAR) plans include two new bridges, 840 meters of carriageway and new cycle and footways.

The scheme will help ease congestion along Taunton Road and Broadway by connecting Parrett Way to Marsh Lane, providing access to the Colley Lane Industrial Estate from the south.

It will also open up brownfield development sites between the River Parrett and Taunton and Bridgwater Canal to support the delivery of planned housing and employment land. The project involves the construction of bridges over the River Parrett and over the Bridgwater & Taunton Canal.

The geology of the site was characterised by highly compressible, thick alluvial deposits associated with the River Parrett floodplain and infilled clay pit. This creates the risk for both excessively large and differential settlements both along the embankment itself, as well as in relation to relatively fixed approach embankments.

The abutments on either side are proposed as MSE walls (similar to Macwall) supported by a Paralink load transfer platform over pile foundations.

The current specifications include accounting for the weight of high load requirements and the provision for future heavier loads or the potential widening of the structure.

#### Solution

The ParaLink LTPs will transfer loads of the mechanically stabilised earth walls into the pile foundations beneath.

The maximum height of the reinforced soil walls was approx. 4m above the Paralink LTP.

For this purpose, four different ParaLink LTPs were designed and installed considering edge piles of 600mm diameter and internal piles of 450mm diameter, with 900mm diameter circular pile caps. Paralink allowed the spacing of the piles to be increased to 2.5m in this particular scenario.

The LTPs were constructed using Class 6I granular fill material. Paralink 400, 500 and 800 were installed across the site. The higher grade Paralink 800 was proposed for the transverse and the Paralink 400 & 500 were used as longitudinal reinforcement.

LTP04 and LTP 03 were constructed in 2018.

**Client:** Somerset County Council

**Designer / Consultant:** WSP?GDGeo

**Contractor:** Whitemountain Breedon Group

**Products used (Qty.)**

**Date of construction:** 06/2018 - 10/2019

[Google Maps](#)

[Google Earth](#)



MacTex W1 S laid over soft clay sub-strata



Granular material placed upon MacTex W1

