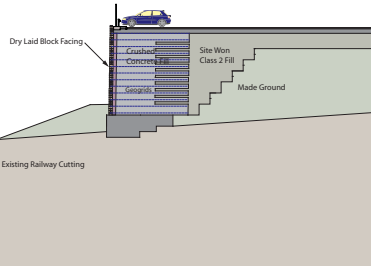
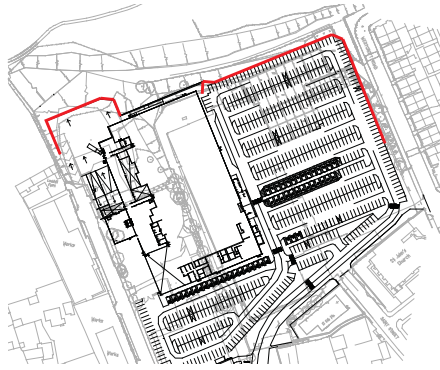


DRY BUILD SEGMENTAL RETAINING WALL PROVIDES HIGH LEVEL SOLUTION FOR WEST YORKSHIRE RETAIL STORE

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To facilitate the construction of a new Retail Store and associated car parking on a brownfield site in Bradford required the construction of 10m high retaining walls on the side slopes of an existing 20m high embankment.

Site and ground investigation revealed the existing slope comprised an old 45°, 10m high, railway cutting comprising very weak Coal Measures overlain by end tipped Made Ground.

Following a review of potential retaining wall solutions a reinforced soil wall was shown to be the most cost effective and practical due to access constraints to the front of the wall.

A net cut and fill requirement meant the wall had to be constructed from site won materials. The retaining wall structural fill comprised well graded crushed concrete, with the retained fill being re-engineered Class 2 fill won from the existing Made Ground.

Design of the retaining wall was in accordance with BS8006, with additional checks on global stability and serviceability

200mm thick 'fillets' of Class 2 fill were included within the reinforced soil block to maintain full use of on site materials. A detailed analysis showed little effect on the wall stability and acceptable settlement.

The type of fill material dictated the use of a reinforced soil system using polymer geogrid reinforcement. Dry laid concrete blocks with fibreglass pins for block to block shear were used, together with a proprietary polymer mechanical connector to 'lock' the geogrids into the facing and mobilise a high proportion of the geogrid strength.

- 2,000m² Keystone Compac Classic Blocks
- 21,000m² Tensar RE Uniaxial Geogrids



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