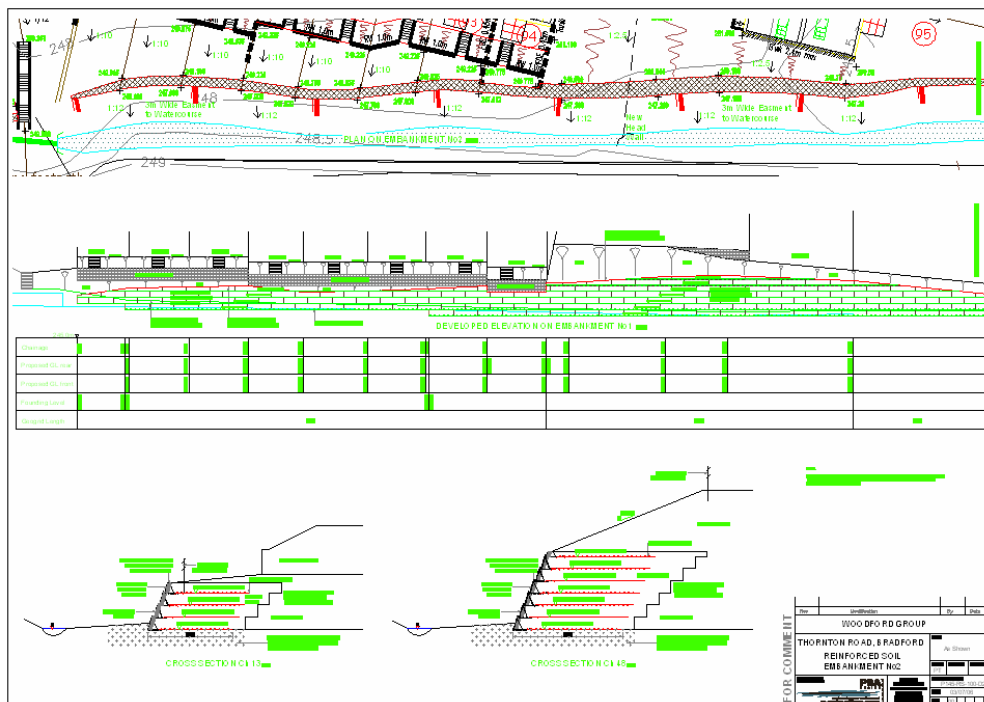


# Thornton Rd, Bradford Reinforced Soil Embankment Design

## Project Description Sheet



### Location

Bradford, West Yorkshire

### Client

Woodford Group

### Completed

October 2006

### Key Project Elements

Ground Investigation  
Earthworks Modelling  
Interpretative Report  
Stability & Settlement  
Analysis  
Geotechnical Design  
Reinforced Earth Design  
Novel Design Solutions

Woodford Land propose to remediate the former Sandstone Quarry on Thornton Road, Bradford to a condition suitable for the construction of a residential development. For the previous 10 years the site has been used as an inert landfill with ash, clay, mudstone, and gravel being deposited. The resulting topography falls predominantly from Northwest to Southeast with a maximum level differential of 18m. An existing small stream flows to the East along the Southern boundary. To enable development of the land the site will require extensive cut and fill operations to create a series of terraces. The majority of the fill will be located in the Southeast corner of the site and a retaining structure up to 4m high will be required adjacent to the existing stream.

Woodford Group appointed PSA Design to undertake the design of the retaining structure and provide design calculations, drawings and specifications for inclusion in the site redevelopment completion report.

A number of options for the type of the retaining structure have been considered including reinforced earth modular block wall, gravity gabion wall, tailed gabion wall, and reinforced earth embankment. The reinforced earth embankment has been chosen as the most cost effective and sustainable solution.