

**RICHARD LEE SCHOOL
COVENTRY, WARKWICKSHIRE, UNITED KINGDOM**

Mass Gravity Retaining Walls

Problem

Wates Construction was awarded the sequenced demolition and reconstruction of the Richard Lee School in Coventry. As part of the works, the older half of the school was to be demolished and rebuilt, whilst the other half of the school remained functional.

The proposed construction of one of the new blocks adjacent to the existing structure caused a clash between a temporary battered slope and the position of the scaffold base around the new building.

To accommodate the scaffold a temporary retaining wall was required to increase the amount of usable space at the lower level. The temporary wall would retain a playground area and would therefore need to accommodate a fence to separate the active construction site from the school.

Solution

Maccaferri was approached by Wates Construction to provide a cost-effective solution to the retaining wall problem. Maccaferri FlexMac DT was identified as the most suitable solution.

Maccaferri provided design assistance for the FlexMac DT system which incorporated the re-use of site-won gravelly clay which reduced time in construction and cost as no imported fill was required. The flexible nature of the FlexMac DT units allowed the clay to be compacted inside the baskets without any damage to the structure being sustained.

The retaining structure was completed by a four-man team in 3 working days and was 35m in length and 2.8m in height allowing for 500mm of embedment.

Maccaferri estimates that the same wall constructed from traditional gabions to form a permanent structure would have taken approximately double the time and cost as much as five times the solution formed from FlexMac DT. The re-use of site-won material also helped the client form the structure more sustainably and reduced movements to and from the site by 27 truckloads (20 t. per load).

Project Stats:

- Wall Height - 2.8m (including embedment)
- Wall Length - 35m
- Total Volume of Recycled Fill - 147m³
- Construction Time - 3 Days (approximately)

Client: Wates Construction

Designer / Consultant: Maccaferri Ltd

Contractor: Maccaferri Ltd

Products used (Qty.)

Date of construction: 04/2014 - 04/2014

[Google Maps](#)

[Google Earth](#)



FlexMac DT Units arrive on site fully palletised and wrapped



FlexMac DT Units can easily be moved into position



FlexMac DT Units opened in place in 30 seconds



The completed temporary retaining wall following construction



Completed temporary retaining structure, constructed in 2 days