

**WHYBURN PRIMARY SCHOOL
HUCKNALL, NOTTINGHAMSHIRE, UNITED KINGDOM**

Mass Gravity Retaining Walls

Problem

In 2005 the Nottinghamshire School Organisation Committee approved the amalgamation of Hucknall Spring Street and Whyburn Primary Schools to form a new community school. Combining the two schools required the construction of a large extension and remodelling of the existing Whyburn School building and grounds. The site topography required the construction of a 1.7m high retaining wall adjacent to the new extension building.

A brick-faced cast in-situ reinforced concrete retaining wall was originally considered by Nottinghamshire County Council (NCC). NCC was keen to consider innovative modern methods of retaining wall construction to save time on a tight construction programme and reduce the overall budget costs whilst ensuring that a highly aesthetically pleasing appearance was maintained.

Solution

The MacWall Diamond system was specified by NCC after a preliminary costing exercise identified significant savings to programme and budget costs.

Anchor Diamond is a dry-built mortarless segmental retaining wall system that combines a highly aesthetically pleasing face with cost-efficient geogrid reinforced soil. MacWall Diamond blocks are durable concrete products that connect using a rear lip locator on the back of each block. The reinforced soil consists of horizontal layers of BBA-certified geogrid (Paragrid 80/15s) placed within compacted granular material. The geogrids are frictionally connected to the Anchor Diamond facing blocks.

Unlike traditionally built reinforced concrete or masonry, a MacWall Diamond Retaining wall does not require a concrete foundation but a layer of compacted granular material as a levelling pad.

The dry joints of the blocks allow for some differential movement to occur without cracks appearing. The off-site manufacturing of the materials ensures careful quality control and the dry build "mortarless" construction does not require highly skilled labour such as bricklayers.

C&BR Construction Ltd installed the wall under sub-contact to the main contractor, Bodill Construction of Nottingham.

Client: NOTTINGHAMSHIRE COUNTY COUNCIL

Designer / Consultant: Bunyan Meyer Ltd

Contractor: Bodill and Sons Contractors Ltd

Products used (Qty.)

Date of construction: 03/2006 - 08/2006

[Google Maps](#)

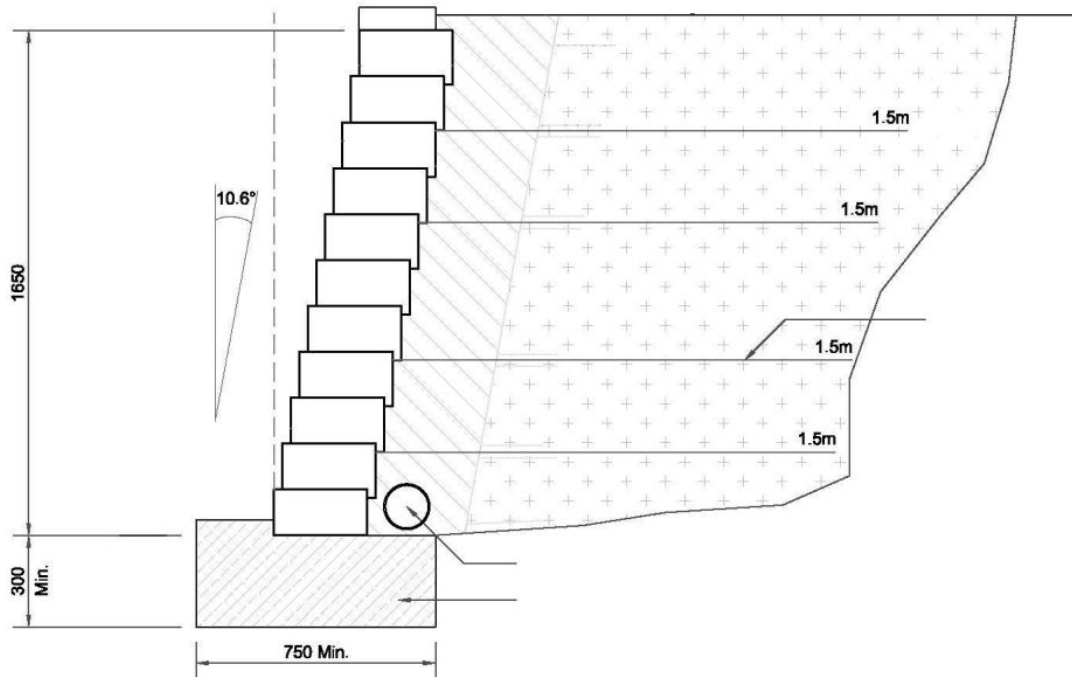
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Post construction of MacWall



Post construction



During construction