

TESCO SUPERMARKET DEVELOPMENT ABERDEEN, SCOTLAND

RETAINING STRUCTURES

Product: MacWall

Problem

In the development of a new supermarket, changes in site level required a number of retaining structures to be constructed.

These retaining walls would support the new car parking areas, access ramps and roads on the development. In all, seven walls were needed, up to a maximum retained height of 4m.

Whichever wall was selected, it had to accord with the colours and aesthetics of the local area and the store itself to ensure consistency.

Solution

Main contractor, Barr Construction approached Maccaferri for assistance in developing a retaining structure solution that would meet the clients objectives yet be cost effective, simple and rapid to build. As the wall was to retain roads, the retaining wall also had to have BBA Certification.

MacWall met these objectives. In addition, analysis of the site won material proved that it could be used as structural backfill to the MacWall.

The MacWall system consists of pre-cast concrete block facing units in combination with polymeric geogrid soil reinforcement. The geogrids are sandwiched between courses of the concrete facing blocks and extend horizontally towards/into the slope to be retained. Structural backfill is then compacted upon the geogrids. This reinforced soil block acts to retain the ground above the wall. Paragrid geogrid with a tensile strength of 80kN/m was used as the reinforcement to the structural backfill.



Post construction



Post construction



Post construction

Architect:

GOODSON ASSOCIATES LTD

Main contractor name:

BARR CONSTRUCTION LTD

Designer:

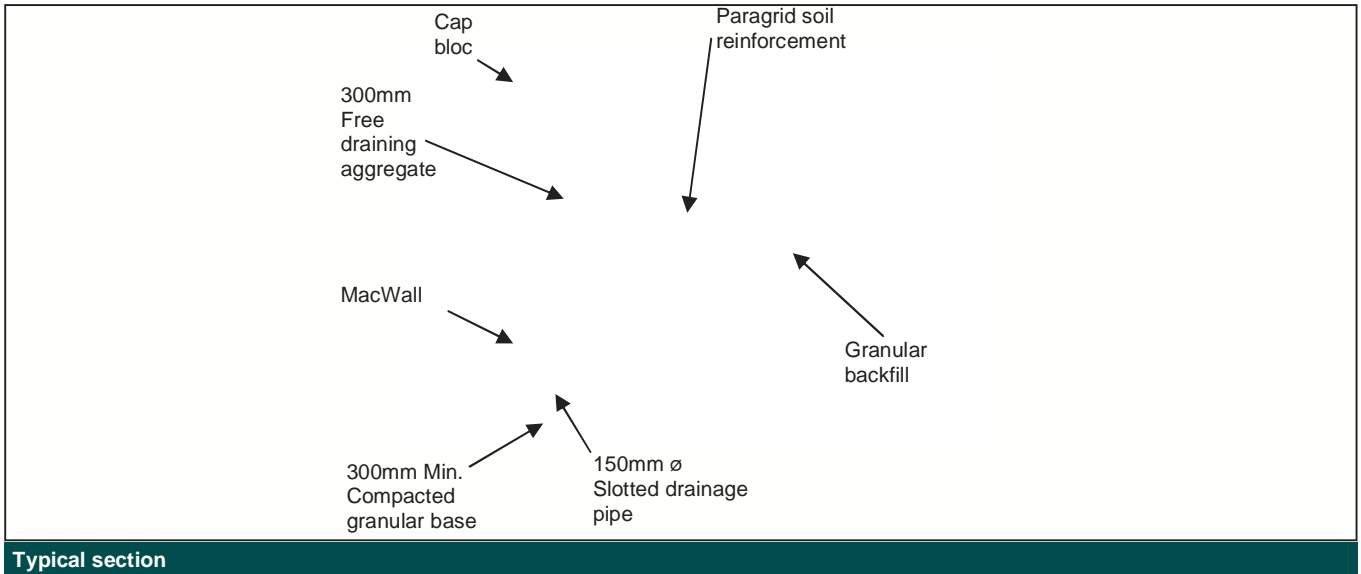
MACCAFERRI LTD

Product used:

MACWALL "VERTICA", PARAGRID

Construction date:

SUMMER 2006



Above the tallest 4.0m high wall, there was a requirement for a free-standing wall, sympathetic to the retaining walls themselves. Because this free standing wall was not part of the retaining structure, there was no need for it to be BBA Certified; Maccaferri offered a free-standing MacWall which would be more cost effective than building the upstand in BBA MacWall blocks. By placing the MacWall blocks back to back, and building upwards, the freestanding wall was created. Concrete was poured between these walls to form a robust system.

Corner blocks were used to enable steps and corner details to be easily constructed. The red colour of the MacWall blocks was sympathetic to the local stone and the superstore aesthetics.

This project showed the versatility of the MacWall range of blocks and the ease with which they can be used to create a wide variety of retaining walls, ramps and freestanding walls.



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