

**BONHILL, STIRLING ROAD  
WEST DUNBARTONSHIRE, SCOTLAND, UNITED KINGDOM**

Mass Gravity Retaining Walls

**Problem**

Housing developer Barratt Homes started a project in Bonhill in West Dunbartonshire, Scotland. The site had a series of areas with uneven ground that needed retaining and stabilising in order to build new homes successfully and the use of retaining walls to terrace the different areas.

**Solution**

Maccaferri was approached by Barratt Homes to come up with a suitable solution for the posed site problems. It was agreed that there needed to be a series of retaining walls.

One large wall and two smaller mass gravity walls would terrace the area around the houses.

Wall one would see a Terramesh® System which was 250m in length with a face area of 1082m<sup>2</sup>. Maccaferri's Terramesh® System is a modular system used to create a rock-faced reinforced soil wall, it is globally used successfully. We use our primary geogrids for reinforcement within the structure at different levels, ParaGrid is laid in between layers providing high-strength reinforcement. Which can support extreme loads. The units are double twisted wire mesh which is formed into a cage and then filled— normally with locally sourced rocks. The backfill for this structure was site won fill.

The two lower-height gabion walls were a total length of 144m with a volume of 430 m<sup>3</sup>.

Our systems are simple and rapid to install, we offer client-specific solutions. We are unlike 'mono-product' companies in the fact that we offer plenty of types, we offer a solution which is optimised to your needs.

**Client:** Advance Construction

**Designer / Consultant:** Maccaferri Ltd

**Contractor:** Barratt Homes

**Products used (Qty.)**

- Gabions 600m<sup>2</sup>
- Terramesh N/A

**Date of construction:** 05/2017 - 09/2017

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Long distance view of the Terramesh® system with fence



Retaining wall around the housing development



At the back of the houses the wall stands tall in the distance



Gabion wall complete with fencing on the top—just over 5m tall retaining wall