

VALUE ENGINEERED WALLS FOR HOUSING SITE BLACKBURN, LANCASHIRE, UNITED KINGDOM

Mass Gravity Retaining Walls

Problem

A plot of land in Queen Victoria St, Blackburn was developed by Countryside Properties. The sloping site required a retaining wall along a boundary in order to level the housing plots and increase the development potential. A pre-cast concrete retaining wall had been initially included in the project.

Maccaferri were approached by Countryside to propose value engineering proposals to replace the pre-cast walls.

Solution

For the 200m long and up to 3.5m high structure, Maccaferri proposed a mass gravity gabion wall. This was built with a steep front face to maximise development land and would offer substantial savings over the proposed pre-cast walls.

In some locations, the gabion wall would face an existing road. As such, it would be exposed to winter salt spray and accordingly, a gabion with 120-year design life under these conditions was required.

Maccaferri designed the gabion retaining structures featuring double-twist mesh woven gabions. These are manufactured from steel wire with zinc-aluminium heavily galvanising and an additional PoliMac coating. This advance in PVC coatings offers a 120-year design life even in aggressive environments backed by BBA Certification. The gabions were filled with hand-placed locally sourced stone to provide a high-quality attractive dry-stone wall-type finish. Plain galvanised gabions would not offer the required design life under these exposure conditions.

Maccaferri gabions have BBA Certification and an EPD Certificate (Environmental Product Declarations - www.environdec.com) which provide transparent third-party assessed declarations on the emissions generated during their manufacture. This enables designers and clients to compare solutions for their on-site issues.

Client: Countryside Properties

Designer / Consultant: Williams Walling

Contractor: Countryside Properties

Products used (Qty.)

- Gabions 495m³

Date of construction: 04/2021 - 05/2021

[Google Maps](#)

[Google Earth](#)



Finished gabion wall stretching along the line of properties



Gabion wall under construction



Gabion wall under construction