

**RETAINING WALL SUPPORTING A630  
SHEFFIELD, YORKSHIRE, UNITED KINGDOM**

Mass Gravity Retaining Walls

**Problem**

The A630 Rotherham Gateway / Sheffield Parkway was to be widened to reduce congestion, cut carbon emissions and provide better access to an adjacent innovation and manufacturing area. This road to the south of Jn 33 of the M1 was to be widened to 3 running lanes, which required retaining walls along the southern side to support the highway.

Maccaferri were approached by the project team of Balfour Beatty and designers WSP to assist in the project.

**Solution**

A PVC-coated welded mesh mass gravity gabion wall was originally proposed within the design. However, the PVC coating on welded units is only 0.25mm thick. Maccaferri proposed gabions with a 0.5mm thick PoliMac coating and which offers a design life of 120 years in a C4 environment.

The overall length of gabion walling was over 500m, split into 5 walls of up to 3m total height. The gabions were filled with hand-placed locally sourced stone to provide a high-quality attractive dry-stone wall-type finish.

PoliMac is an advanced polymer coating that offers far greater technical performance than PVC coatings:

10x abrasion resistance 4x the better elongation after UV exposure Greater resistance to chemical attack Does not have phthalates in its manufacture.

Greater flexibility at very low temperatures 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.

**Client:** Highways England / Sheffield City Council

**Designer / Consultant:** WSP

**Contractor:** Balfour Beatty

**Products used (Qty.)**

- Gabions unknown

**Date of construction:** 04/2021 - 11/2021

[Google Maps](#)

[Google Earth](#)



Gabion units laid out ready for filling - note highway above



Units filled, awaiting next course



Gabion wall completed