

Harlaw Bank Housing Development *Balerno, Edinburgh, Scotland*



Vertica

LOCATION:

Balerno, Edinburgh, Scotland

PRODUCTS USED:

Anchor Vertica®, Maccaferri gabions

CONSTRUCTION DATE:

July 2001– July 2003 phased construction

MAIN CONTRACTOR:

Crummock (Scotland) Ltd

WALL SUBCONTRACTOR

Maccaferri Construction Ltd.

DESIGNER:

Harley Haddon Partnership

THE CHALLENGE

The property developer, Applecross, specialises in creating exclusive residential developments within conservation areas. A new development in Balerno, Edinburgh required innovative retaining wall solutions to meet two distinct needs;

- River training retaining walls including flood prevention measures to the adjacent Bavelaw Burn
- Aesthetically pleasing retaining walls in the rear gardens of the properties

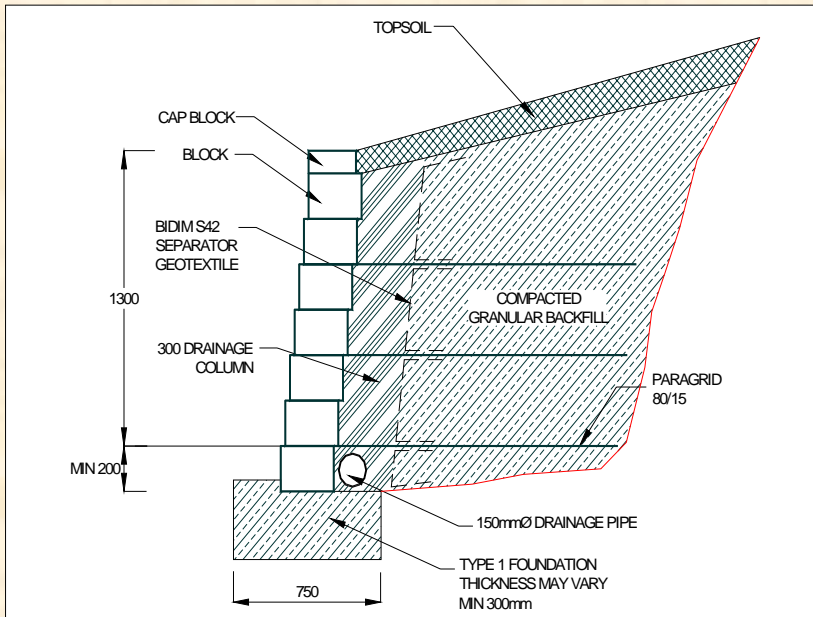
Applecross worked closely with SEPA to ensure the solutions were in harmony with the wooded environment.

THE SOLUTION

Maccaferri gabions were selected for the river retaining walls (see separate Case History), and Anchor Vertica segmental blockwork reinforced soil walls were chosen for the highly visible retaining walls in the property gardens.

Applecross engaged Maccaferri Ltd and Maccaferri Construction Ltd to design and supply the structures.

The high quality Anchor Vertica walls offered a retaining structure in keeping with the quality construction of the homes and combined engineering strength with aesthetic appeal.



Left: Typical cross section through structure

Above and below: Anchor Vertica segmental blockwork walls can easily be constructed with radii, step details and staircases to add visual interest to structures.

The system consists of 'split-face' concrete fascia blocks with Paragrid geogrids to reinforce the structural backfill to the wall. The geogrids are sandwiched between courses of the facing blocks.

Positioning lugs on each block ensure accurate alignment and a rapid construction. The setback of 25mm per 200mm high block creates a 7° face angle, minimising land-take at the foot of the wall.

The walls at Balerno, required multiple layers of Paragrid 80/15S polyester geogrids to provide adequate soil reinforcement.

The flexibility of the Anchor Vertica system enabled curved walls to be constructed easily, enhancing the visual appeal. For consistency, low height walls, and stair details within the property gardens were also constructed from the Vertica blocks. Low-height walls (typically <900mm in height) do not require the geogrids soil reinforcement, although this is dependent upon the prevailing ground conditions.

The high quality 'split face' concrete block finish can be supplied in a range of colours. As a final detail, a capping block is secured to the top course of blocks with an epoxy adhesive.



Manufacturing & Sales Support

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