

STEELGRID HR30 MESH MYJAVA, SLOVAK REPUBLIC

SLOPE STABILISATION - MACRO SYSTEMS

Product: Steelgrid HR30 Mesh & Steelgrid HR System Plates

Problem

A new shopping centre was under construction in Myjava, 100km to the north of Bratislava. As part of the early ground works it was necessary to form a large cut slope on the site, into the local carbonate geology.

The cutting slope was deemed to be potentially unstable and project designer, Neo Domus s.r.o., investigated potential solutions to stabilise the slope.

A number of options were considered including tie-back anchors combined with cast-in-situ concrete beams. However these initial solutions failed to address the problem of weathering and ravelling failure of smaller rock debris.

Solution

Accordingly, the designer selected 1700m² of Maccaferri Steelgrid HR30 mesh, in conjunction with a regular anchorage network to stabilise the slope.

During formation of the cut, it became clear that the weathering of the rock caused the loss of fine material from the slope face. To combat this problem the final installation of the mesh was carried out using a combination of Steelgrid HR30 over a fine geocomposite matting. Steelgrid HR30 offers high strength at low strain making it ideal for the likely slope failure mechanisms on this project. Additionally, with Steelgrid HR, Contractors do not need to create depressions around the anchorages, pretension the mesh, or have overlaps between adjacent mesh panels, all of which reduce installation time and cost.

The installation covers an area of rock slope, 120 linear meters with slope heights of between 12m and 18m. The final anchor pattern varied according to the design.

Client:

ROCK-Build s.r.o.

Main contractor:

ZIPP s.r.o.

Designer:

Neo Domus s.r.o. (Dr Ing. Marián Drusa PhD.)

Products used:

STEELGRID HR30 & STEELGRID HR PLATES

Date of construction

SUMMER/AUTUMN 2010



Steelgrid HR30



During construction



After construction

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