



LOCKSTEIN,

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Berchtesgaden

2017

Markt Berchtesgaden Community
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HTB Baugesellschaft m.b.H.

A much-trodden hiking trail in Berchtesgaden with a [historic Brine pipeline](#) and a kindergarten underneath were acutely affected by rockfall. The Berchtesgaden market thus put out a tender for the construction of a rockfall barrier in the south-east slope area along the hiking trail to the Lockstein viewpoint café.

Heavy construction traffic cannot operate in this area; there were also no storage or work areas available. In the sector of the fence segments under the forest soil overlay, silty to very silty hillside debris, heavily interspersed with rocks and block parts and in part open-pore rock/block layers had to be contended with.

It was assumed from the local situation, that the thickness of the loose rock cover - hillside debris under the forest soil overlay - was several metres (> 5 m), so that it could be basically assumed that for the anchor dimensioning, the binding line lies in loose rock throughout.

Soil classification DIN 18 301 (2012) loose soil covering BN 1, BN 2, BS 1 - BS 4; boulders/ outcropping rock FV 2, FV 5, FV 6, FD 2

(According to planning documents of Engineer Bernd Gebauer GmbH, Traunstein)

Due to the conditions described above, the barriers were installed by hand without machinery.

Anchoring: wire rope anchors 5 m long (lateral) and 4 m long (support anchors) were used. In the looseened rock area, for the lateral anchor rope on the west side flex heads were used instead of wire rope anchors.

Touristic infrastructure, Infrastructure, Other

Galvanized, GEOBRUGG SUPERCOATING

500 kJ

3.0 m

29 m - 66 m



The installed RXE-500-LA barrier



Example of boulder size in a possible rockfall



The low weight is a huge advantage when constructing barriers, particularly if, as in this case, the use of heavy machinery is not possible



Final work on the RXE-500-LA rockfall barrier. Drilling work was performed by a walking excavator with a drilling rig



Overview of the fully installed RXE-500-LA rockfall barrier couple of months after installation. Visible protected touristic route



RXE-500-LA with a unique rope guide - the upper support rope serves as a vertical rope



Due to the growth of the natural vegetation, the barrier is hardly noticeable any more in this tourist area. One of the protected buildings in the valley is the kindergarten, which was previously threatened by rockfall



The barrier is not only lightweight, but also has the highest protective function in its energy class



The barrier already proves its worth shortly after installation. Rockfall of different magnitudes occurs regularly



The Emmaus circular trail as a tourist attraction is now completely protected from rockfall

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