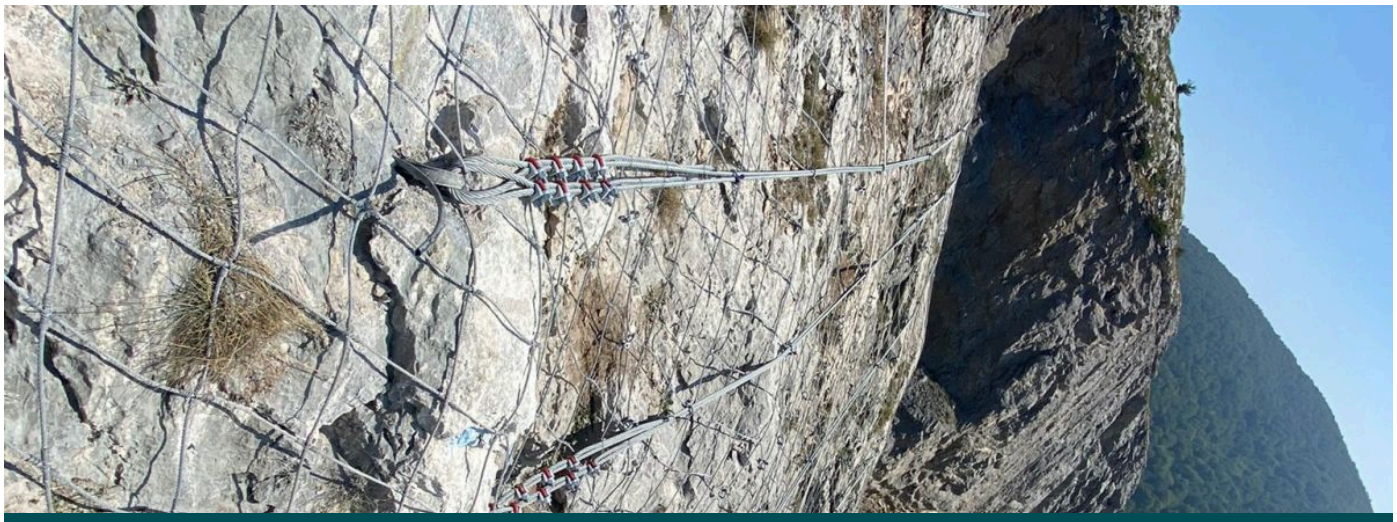
SECURING THE AREA OF ZIORDIA QUARRY

ZIORDIA - NAVARRA - España



TYPE OF PROJECT	YEAR OF CONSTRUCTION	CLIENT	CONTRACTOR	DESIGNER
Dynamic Rockfall Barriers	**2021**	**Cantera De Ziordia**	**Inaccés Geotècnica Vertical**	**CRS Ingeniería**

PROD. RELATED
Rockfall Barriers (), Panels ()

Challenge

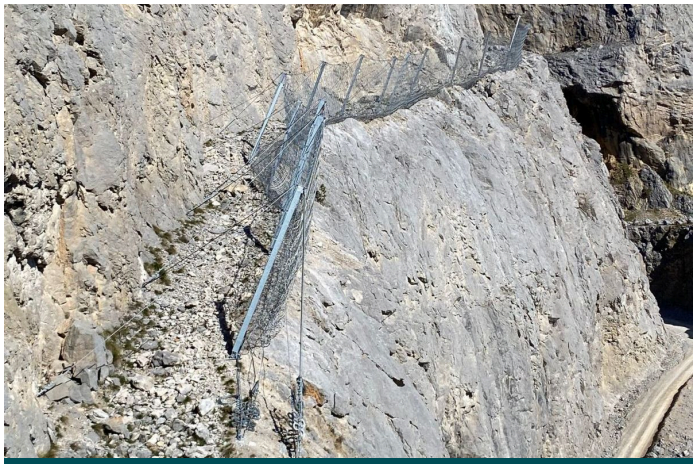
The Ziordia quarry has an orography formed by limestone rock, with steep slopes as a result of quarrying, and potentially unstable large blocks. The company CRS Ingeniería contacted Bianchini Ingeniero to analyse the situation and possible solutions, and subsequently the company Inaccés Geotècnica Vertical also intervened. One of the main risks was the blocks that could fall from a 40-metre-high, 15-metre-wide mochón, located on one of the quarry's usual passageways. This represented a potential risk for the installations and the workers themselves. Therefore, a series of actions were carried out to stabilise these blocks and protect the area.

RB 3000

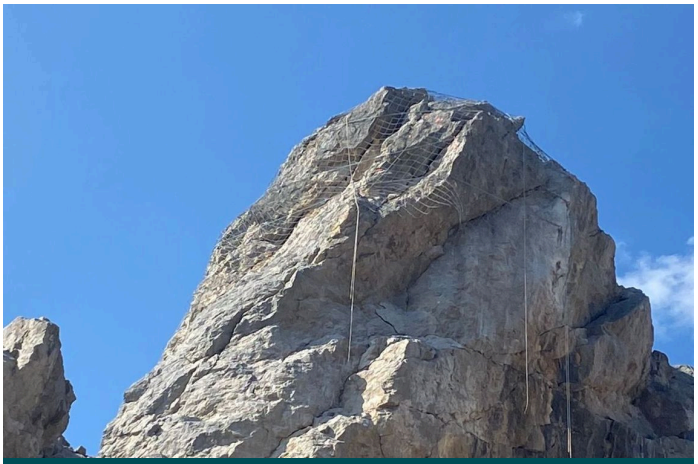
RB 3000

Solution

To secure the area, two types of actions were carried out: 1. An "active" solution to prevent the larger blocks from being mobilised. This system consists of: - ICAF 44 double cable flexible anchors, which fix the unstable blocks to the part of the rock massif that is sound. - HEA 300x300-10 cable net, a cable net with a wire knot of very high resistance and rigidity, which retains the unstable blocks as a girdle. - Steel cables, which distribute the tensions of the cable net to the flexible anchors embedded in the ground. 2. In addition, a "passive" solution, consisting of: - A dynamic barrier RB 3000, 6m high and 150m long. The function of this barrier is to stop the smaller blocks that could fall so that they do not affect the quarry installations. Both the HEA 300-8 cable net and the dynamic barrier have CE marking and full-scale tests in accordance with current regulations, which guarantees their performance.



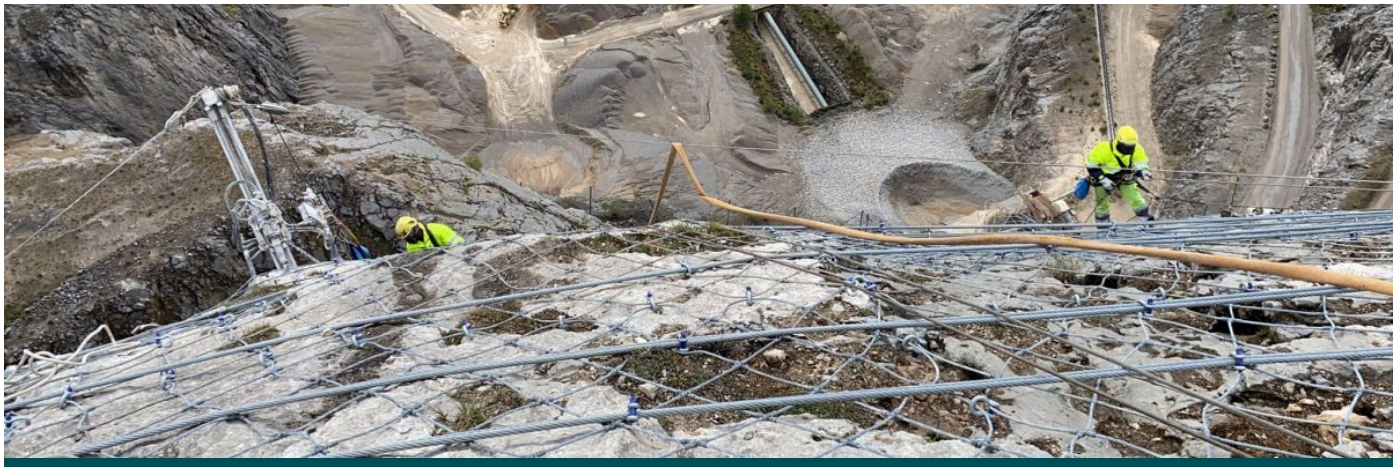
RB 3000



HEA Panels 300-10

HEA 300-10

HEA 300-10



HEA300-10 Installation

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OPEN GOOGLE MAPS

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