

MUGUEIRAS SUBSTATION, EDP
ARCOS DE VALDEVEZ, PORTUGAL

RETAINING WALLS & SOIL REINFORCEMENT

Product: Gabions

Problem

This industrial zone of Mugueiras is very important for the development of the Ponte de Lima region of Portugal.

Electricity is supplied to the industrial area by Electricidade de Portugal (EDP) through a sub-station in Arcos de Valdevez. An investment plan called for the existing temporary sub-station to be replaced with a larger permanent one, without disrupting power supplies to the industrial units in the area.

Due to this, the entire work had to be completed within 60 days. Due to topography challenges a tall retaining wall that would be rapid to install was required to support an unstable slope on the project site.

Solution

EDP approached Maccaferri for assistance on the design of a gabion retaining wall for this element of the works. The wall would be up to 16m high.



Gabion wall under construction



Gabion wall in progress

Client:

ELECTRICIDADE DE PORTUGAL (EDP)

Main contractor:

VISABEIRA / EDIVISA

Designer:

EDP

Products used:

GABIONS: 7,200m³

Date of construction

August 2016

Double-twist steel wire mesh gabions with Galmac 4R coating were specified for this project given the likely exposure conditions, required design life and gabion performance in accordance with EN10223-3:2013 and EN10244.

In total 7,200m³ of gabions were installed by the contractor in 60 days.

The gabion units are delivered 'flat-packed' to the project site, and then assembled and packed with suitable rock fill to minimise void volumes. Maccaferri gabion walls are amongst the most cost effective retaining wall systems and have been tried and tested for over 100 years.

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