MINE TIP WALL
Product: Terramesh®, ParaGrid®, MacTex® N

Problem
A platform had to be raised to the level of the top of a primary crusher to make it possible for pay-loaders and tip trucks to tip ore into the crusher bin for processing. The area generally did not have any geological problems, the crusher was already constructed with no problems before the wall was built. The wall simply had to be raised up in front of the crusher. Great care had to be taken in this regard not to interfere in anyway with the crusher bin which is usually erected after or seldom, during the construction of the wall.

Solution
Maccaferri Africa opted to go for the Terramesh® system wall because it afforded us more flexibility better than any other system to set it back a few millimetres with every basket so as to avoid interference with the bin. The Terramesh® system was also preferable because of the abundance of suitable rock fill in the vicinity of the site which made it cost effective. The client also preferred it because it does not require highly skilled personnel as in the case of MacRes® or MacForce® for an example, to construct satisfactorily.

Client name:
SENET PROJECTS
Main contractor name:
AMARA MINING
Consultant:
SENET PROJECTS AND AMARA MINING
Product used:
TERRAMESH®, PARAGRID®, MACTEX® N
Construction info:
Construction date: FEBRURAY 2013
Completion date: MARCH 2013
Benefits
The wall was designed with very high loading, which included a 106kN point load immediately behind the basket on the surface of the slab, a second point load of 71kN about 5.5m behind the first one. It also has a horizontal load of 79kN/m on the buttress of the slab, the slab itself exerted a uniformly distributed load of 24kPa on the crest of the wall. Finally the whole system was put under seismic action with an applied coefficient of horizontal acceleration of 0.03g. This design was carried out on MacStars W and also verified on Phase² finite element design software.