

TARANTO QUARRY TANDRAGEE SITE, CO ARMAGH, N IRELAND

SLOPE REINFORCEMENT

Product: GABION TERRAMESH, PARAGRID

Problem

Well known concrete products manufacturer and natural stone supplier Taranto de Pol wanted to develop their existing Tandragee site in Co. Armagh. A 9m high structure was required to retain a road which was to provide access for aggregate and cement trucks to storage hoppers at their batching plant.

Being a specialist in concrete and having a ready supply of materials, Taranto de Pol initially considered a cast-in-place reinforced concrete structure. Despite this, they wanted to explore alternatives and approached Maccaferri Ltd's Belfast office for advice.

Solution

Maccaferri proposed a 9m high reinforced soil solution using the Terramesh System. The face of the structure was 75deg from horizontal thereby increasing the available area for the access road. Terramesh features a gabion fascia unit with an integral woven steel mesh geogrid 'tail'. This geogrid is placed horizontally between layers of compacted structural backfill, reinforcing it and making the soil perform far better than it would do in its natural 'unreinforced' state.

This uniform reinforced block of soil was then capable to accommodating the 20kN/m² surcharge expected from the delivery trucks.

Terramesh forms flexible reinforced soil structures and can accommodate far greater differential settlements than any concrete block or precast alternative. On taller walls where forces within the embankment are higher, the Terramesh steel geogrids are supplemented by polymeric Paragrid, installed in conjunction with them.

This solution was accepted by Terranto de Pol. Although they had not installed Terramesh before, Tarranto de Pol had an on-site labour-force and decided that following on-site training by Maccaferri personnel, they would construct the wall themselves. This confidence was given to Tarranto, knowing that they had a reputable supplier to whom they could turn in the event that they needed on-site assistance.



Before construction. Note aggregate hoppers in background.



Gabion Terramesh during construction



Gabion Terramesh during construction

Client:

TARANTO DE POL

Designer:

MACCAFERRI LTD

Products used:

GABION TERRAMESH, PARAGRID

Date of construction

SEPTEMBER 2007

