

**WINCHESTER SERVICES, M3 MOTORWAY  
WINCHESTER, HAMPSHIRE, UNITED KINGDOM**

Mass Gravity Retaining Walls

**Problem**

As the proposed service area was in an area of ancient woodland, local conservation groups were keen to preserve the natural environment. An enquiry had ruled out a reinforced concrete solution and therefore an alternative was required. Any proposed scheme had to fulfill a number of key criteria identified at the enquiry:

- The design had to conform to Highways Agency requirements for strengthened earthworks, namely a minimum design life of 60 years.
- It should offer a compact solution confined to a build footprint within the existing highway.
- It must meet concerns of local environmentalists for a 'natural' engineering solution.

**Solution**

Solution:

Maccaferri gabions could fulfill all these demands. Both carriageways of the M3 remained fully open during the construction phase. The gabion walls, with a footprint of just 3.5m were built within the 'hard shoulder' area. The lack of working Room, and other site logistics, dictated that cutting the chalk slopes took place by day and the gabion walls were installed at night in a 24 hour 'round the clock' operation.

P C Construction, a gabion and soil reinforcement specialist sub-contractor, installed the gabion walls. A total of 5,500m<sup>3</sup> gabions were installed at an average rate of construction of 140m<sup>3</sup> gabions per night. The Green Terramesh soil reinforcement system was installed by P J Carey.

The completed gabion walls will be allowed to green up naturally. It is possible to introduce preseeded topsoil within the wall, but Landscape Architects McGregor Smith recommended a natural stone finish. This will allow the walls to green up naturally with local vegetation and avoid importing alien species into a conservation area.

**Client:** Private

**Designer / Consultant:** Woods Warren

**Contractor:** PC Construction Ltd

**Products used (Qty.)**

- Gabion 5500

**Date of construction:** 07/2001 - 11/2001





After construction



After construction