



Sustainable Technology

## Soil Nails

Soil Nails are commonly used to stabilize the faces of cut slopes, in order to reduce excavation quantities by the creation of steeply inclined stable slopes to the faces of excavations.

Traditionally Soil Nails have comprised of a single steel member, completely encapsulated by grout, penetrating the ground through the active, "unstable" zone into the resistant, stable zone, thereby providing resistance to the shear forces of the active zone. Soil Nails are similar to soil anchors but have the distinguishing difference of being passive, that is to say that no pre-load is applied as part of the installation process.

The principal application for Soil Nails is in slope stabilisation, in conjunction with a concrete facing to the slope. They are installed on a relatively closely spaced grid pattern with the objective of creating mass stability in the soil.

As well as the traditional Soil Nails Menard offers a hybrid "active" soil nail containing two steel members: one to perform the role of the passive soil nail and a second pre-loadable component with the dual purpose of pulling the facing concrete onto the soil and improving the shear capacity of the soil.



Sustainable Technology