



Retaining Wall Blocks - Locbloc - Extreme Application Gallery (Soil Nail / Locbloc Combination)

This project was a 'joint venture' of sorts between DUBRICON and DATEM DRILLTEK. Dubricon supplied the retaining wall blocks, Datem Drilltek installed the 30mm soil nails.

There were two objectives.

The first objective was to create a terraced area of approximately 17 meters by 1 meters on one level and 2 meters on the upper level on a property where a back yard was hardly existent because of it's extreme and sudden slope.

The second objective was to provide an aesthetic alternative to the 'shot-crete' finishing stage of soil nailing procedures by adapting the "LocBloc" retaining wall block to the system. This required the 'custom making' of a 'grooved 'LocBloc' for layers extending beyond the 'stand alone' height of the 'LocBloc'

The very first step was to loosen the 'backfill' at the site to locate the adobe. Once the adobe walls were located, a series of four 30 mm soil nails were drilled into the adobe.

Next, scrap I-beams with perforations were erected after being properly plumbed with the threaded head of the soil nails protruding through the I- beam. The soil nail was then 'locked' into the I-beam with a nut.

At this stage of a typical soil nail installation, a wire mesh is usually what is 'locked' into the soil nail .This wire mesh will be the substrate for 'shot-crete'. The following sequences speak for themselves:



Soil Nail seen inserted through I Beam Post, First course of LocBlocs laid on CHB course laid in front of I-Beam



"Standard" (groove less) LocBlocs laid until Fourth layer (40 cm), Non-Standard LocBlocs (locBlocs with a 4cm wide by 4 cm deep groove on the top made specially for this project) on the Fifth layer. The Non -Standard LocBlocs with the grooves appear again on the Tenth Layer.



12 mm re-bar is inserted in LocBloc groove. The LocBlocs are grouted and then the re-bars are welded to the I-Beam



Welding of 12 mm re-bars to the I -Beams, LocBloc wall proceeds upwards until Tenth Level-wherein the same process of inserting 12 mm re-bars,grouting of 'grooved' LocBloc and welding them to I-Beams occurs again.



Backfilling of areas behind LocBlocs with waste sand or gravel ('gravitas'), close-up of 'built - in' weep holes of the LocBloc (gaps formed by the irregular contours of the LocBloc face).

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