

Foundation with Precast Piles of structures E-4.1, E-5.1, E-7 Y E-8.1 Castellbisbal/Mollet junction, Mollet (Barcelona)

Owner:	MINISTERIO DE FOMENTO
Client:	Nudo Mollet UTE (FCC-ACCIONA)
Period of execution:	February - November 2009
Contract value:	2.400.000 €



Between February and November 2009, the foundation was made in three piling operations by means of Terra precast piles in structures E-4.1, E-5.1, E-5.3.1, E-7 y E-8.1 of the branch line, Castellbisbal/Mollet, Mollet junction in Castellbisbal (Barcelona).

The soil consists of a first layer of anthropic filling 2.70 m. thick, and then a layer of sandy-clayey silts of a dark reddish brown tone whose thickness is 3 m., followed by a layer of marly silt with some clay appearance with a depth of 7 m. Finally a layer of brown loamy clays where the piles were embedded about 5 meters until reaching adequate rejection.

The project consists of 5 structures with a total of 52 piers. The length of the piles varied between 12 and 18 m., a total of 1,395 piles of section T-400 were driven.

As piling control, 104 dynamic load tests (AHP) were performed.

In order to execute the project, 2 last generation IMT rigs with hammers of 9 and 11 Tn. were mobilized, complying at all times with the strict deadlines set by our client.

The foundation solution with precast piles was chosen as the most appropriate technical and economic solution for the project, in addition to its high level of control, time of execution, cleanliness and respect for the environmental surroundings, due to not generating contaminating detritus or extraction of soil.

