In many cases for soil improvement it is recommended to apply precast columns with square cross-sections of 0.25, 0.30, 0.35 or 0.40m due to particular site considerations or/and soil conditions (presence of low-bearing soils with very low strength parameters, such as peat or gyttja).

Precast columns (whose construction solution is similar to that of precast reinforced concrete piles) are made of low-grade concrete with minimum reinforcement to enable production, transport and driving of precast elements. Applications of precast columns allow for achieving capacity equal to other soil improvement technologies while reducing time of completion (installation of elements ready to transfer loads).

Moreover, the risks related to forming columns in low-bearing soils are eliminated, such as uncontrolled flow of concrete mix, loss of column integrity or damages to new columns during ground improvement. Due to a regular shape of precast elements, they can be used under geosynthetic mattress and concrete or reinforced concrete construction elements. Additional precast concrete caps allow for reducing both the effective clearance between columns and number of columns.