



# USER MANUAL

PLPak Version 1.01

STRUCTURAL ANALYSIS SOFTWARE USING BOUNDARY ELEMENTS  
METHOD

PLPAK basic tutorials

Tutorial 10 – PLGen supporting elements

CONTACT DETAILS:

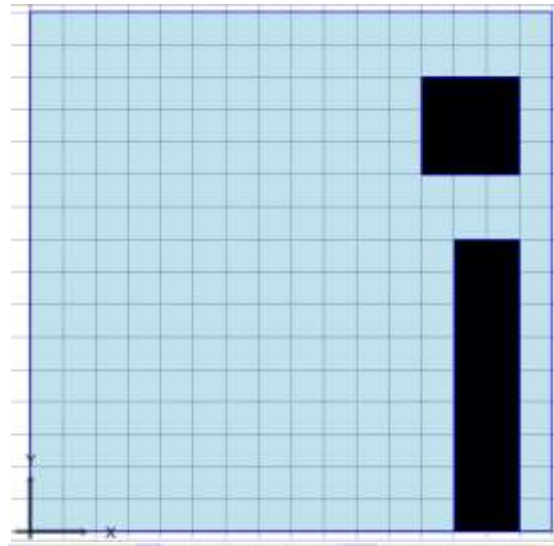
[www.be4e.com](http://www.be4e.com)

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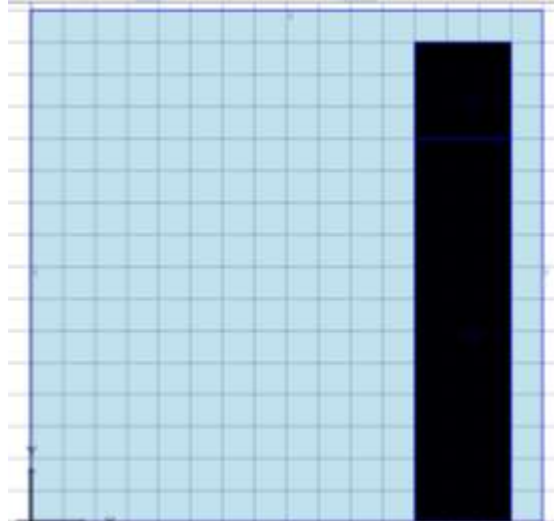
## Tutorial 10

The aim of this tutorial is to tackle the supporting elements in PLGen which are columns, walls, piles, soil support, wall assembly and beams along with their properties.

I –In PLGen, draw a structure as shown with a slab, column and wall support and define them.(The square being the column and the rectangle being the wall support).



II –Join the both together and select the wall and the column then click on Wall Assembly. Click on Divisions and notice that the value is 4 for both the column and the wall.



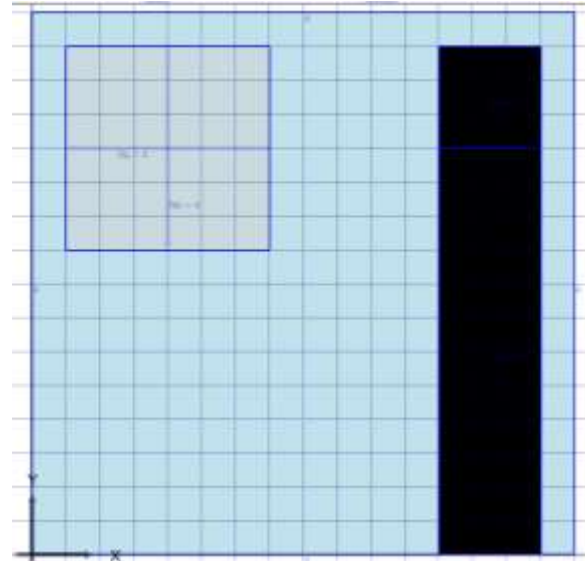
III – Right –click on the wall assembly and the following box appears. Notice the tab that says Explode, when clicking it the objects will separate. The CG of an object is important as it calculates the inertia of the object and is used in both the wall assembly and the column.



IV – After the explosion the column will be recognised as a wall, by right-clicking under select the shown dialogue box appears.



V- To simulate the soil support, draw a simple object and under Select mode define it as a soil support.



VI – Right –click on the soil support and the shown dialogue box appears.  $K_s$  is the value of the sub-grade reaction while  $N_a$  and  $N_b$  are the divisions.



Piles can be entered into the PLGen using circular columns and the settings are defined as required. Usually for it to be considered as a pile, it is suggested that it be placed below.