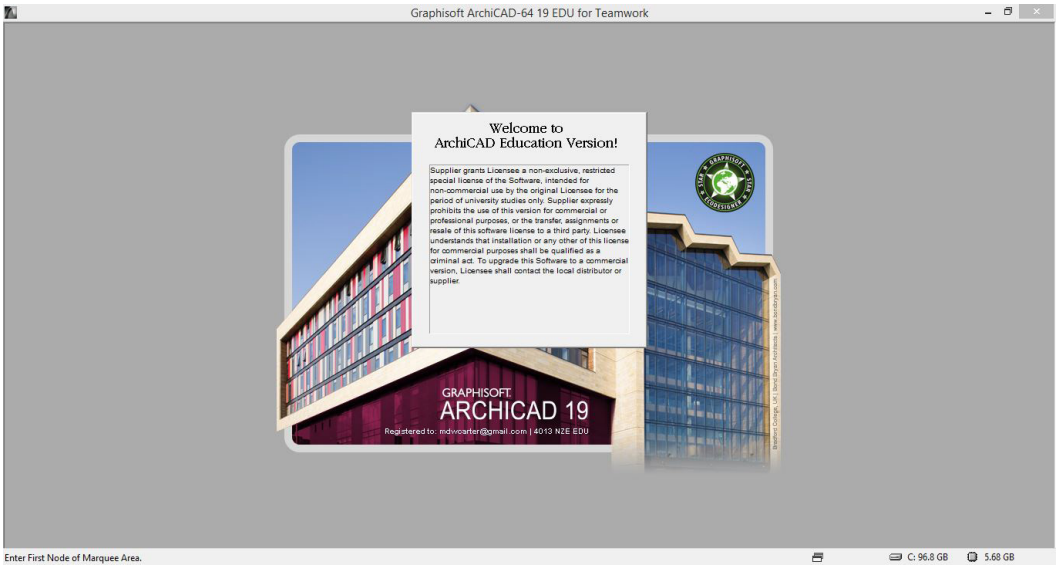
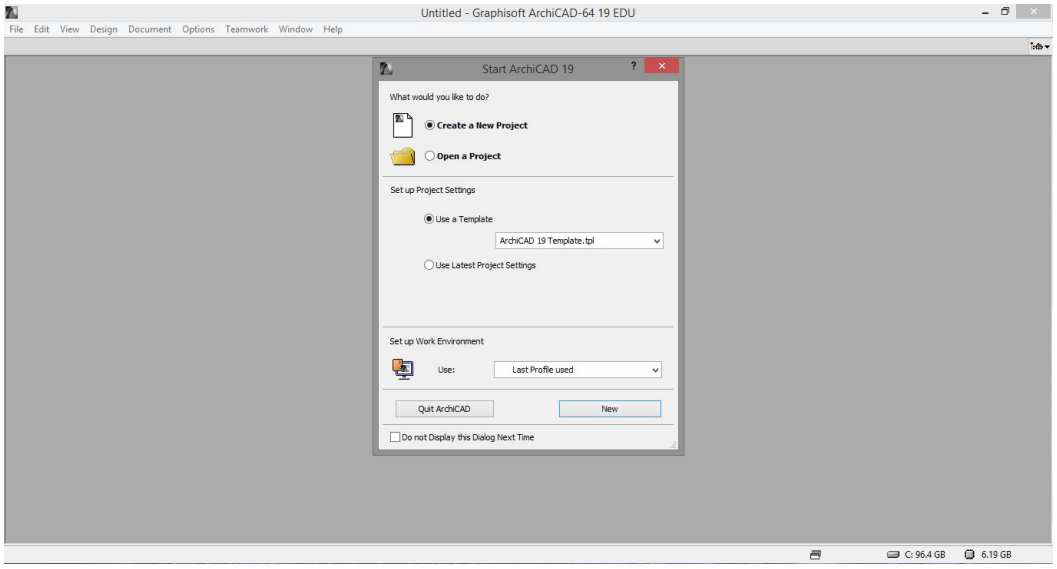
Archicad Tutorial



Open archicad from desktop

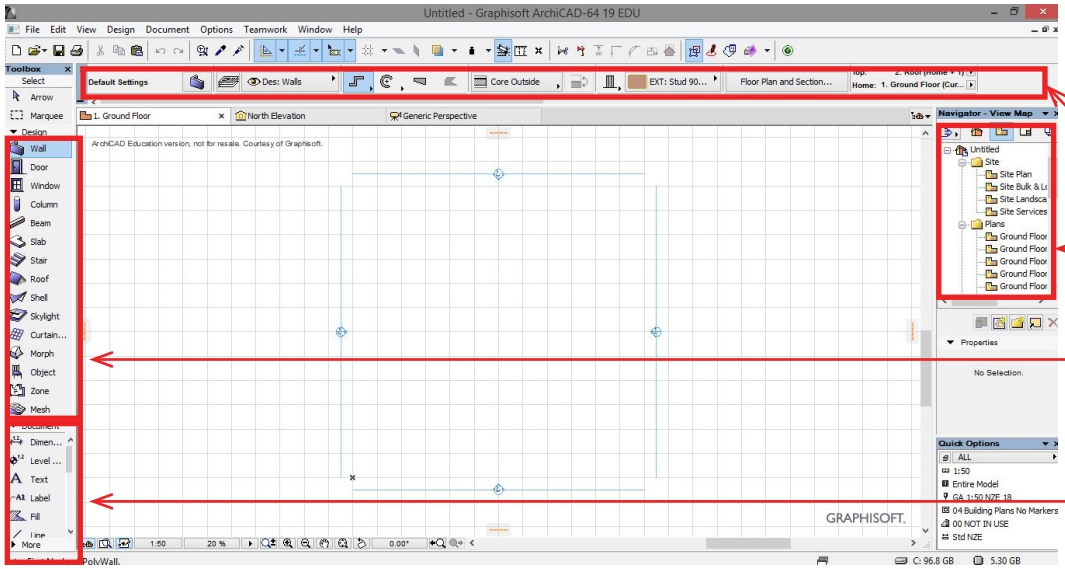
Click the Grey Box



Note: To open a preivous project click:

Open a project > Browse for solo project

Select : Create a New Project > New



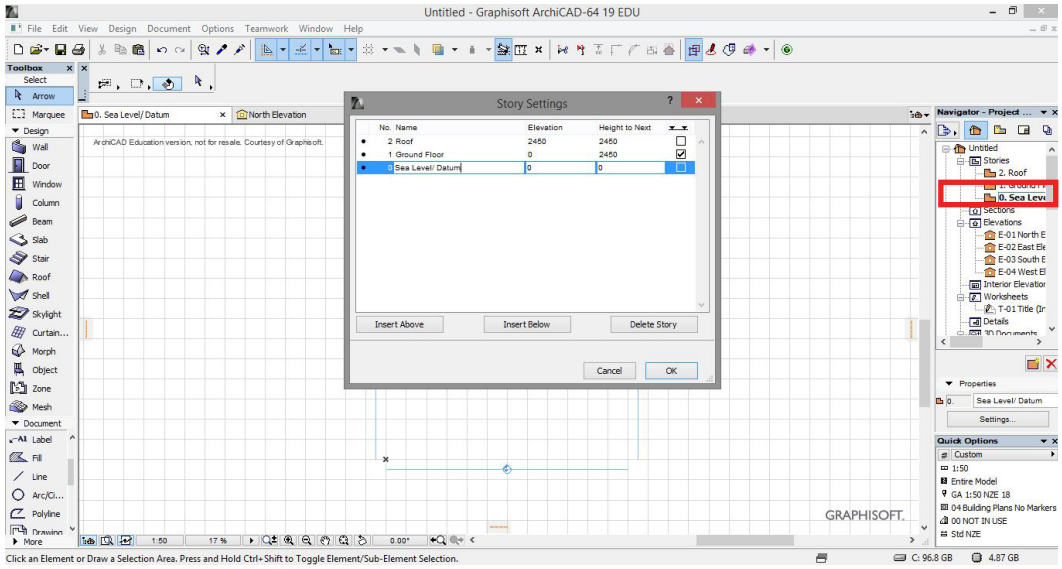
The archicad 2d view interface

Properties bar

Stories and layout

Design Tool selection

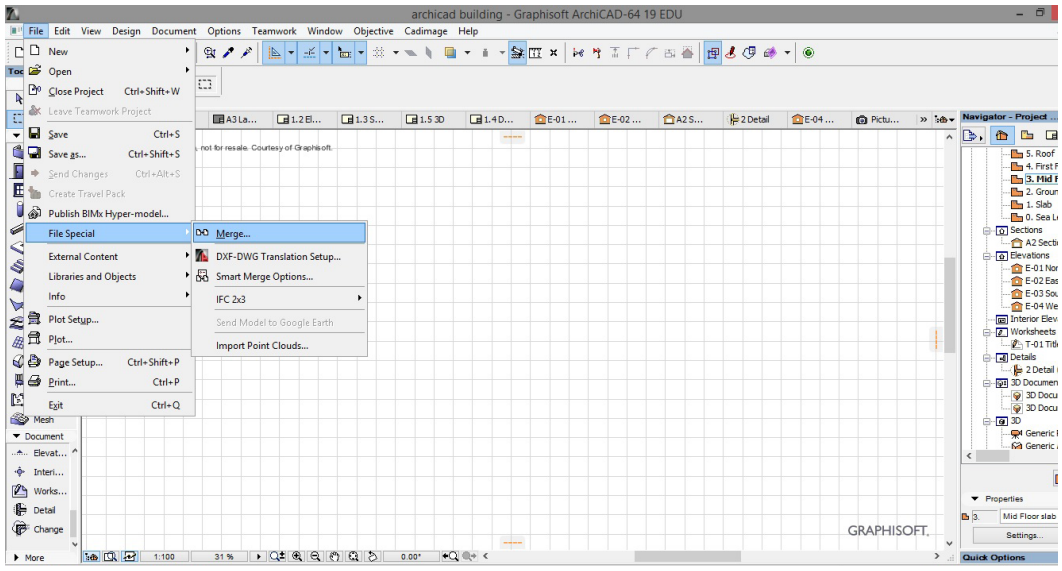
Documentation Tool Selection



[Rick Click] on a story > Story Settings > (Adjust stories) > OK

Levels

The floor levels can be adjusted in the storey settings window by adding or subtracting storeys and changing the ‘height to next’ for the storey height.



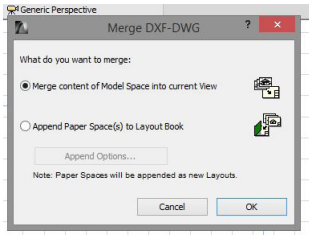
File > File Special > Merge

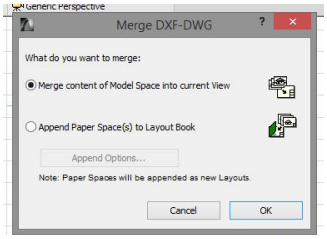
Contours

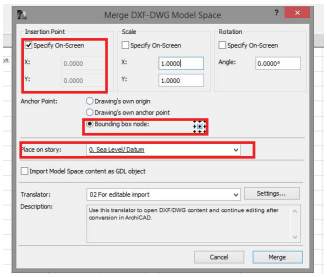
Importing any 2d or 3d document can be done by this step.

Note: To Import 3d models you have to be in the 3d view.

In this case we are importing contour lines to make a **Site Mesh.**



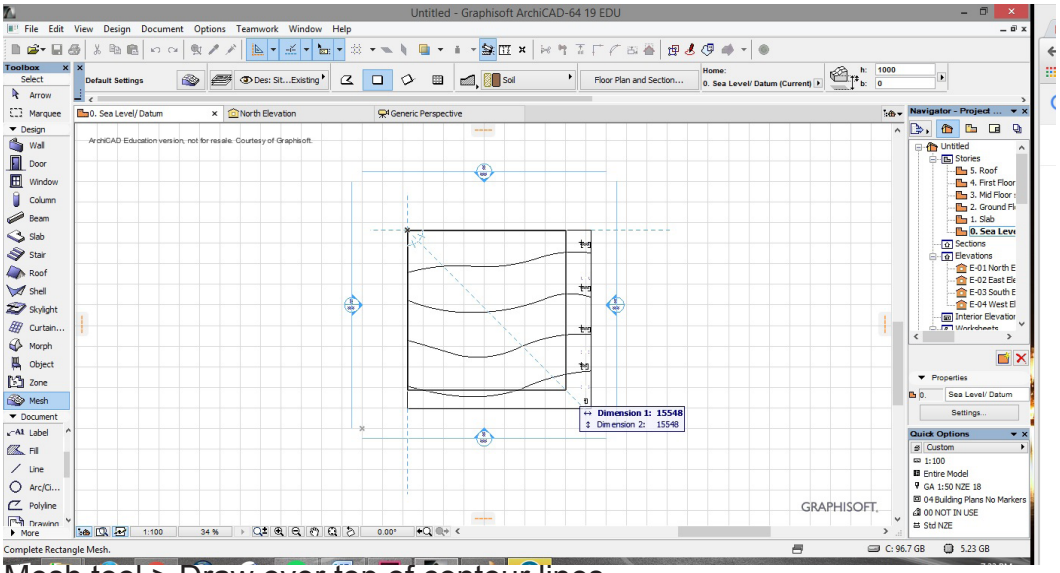




Select the file you want.

Note : In the merge DXF - DWG window make sure the following are selected in the red boxes and the

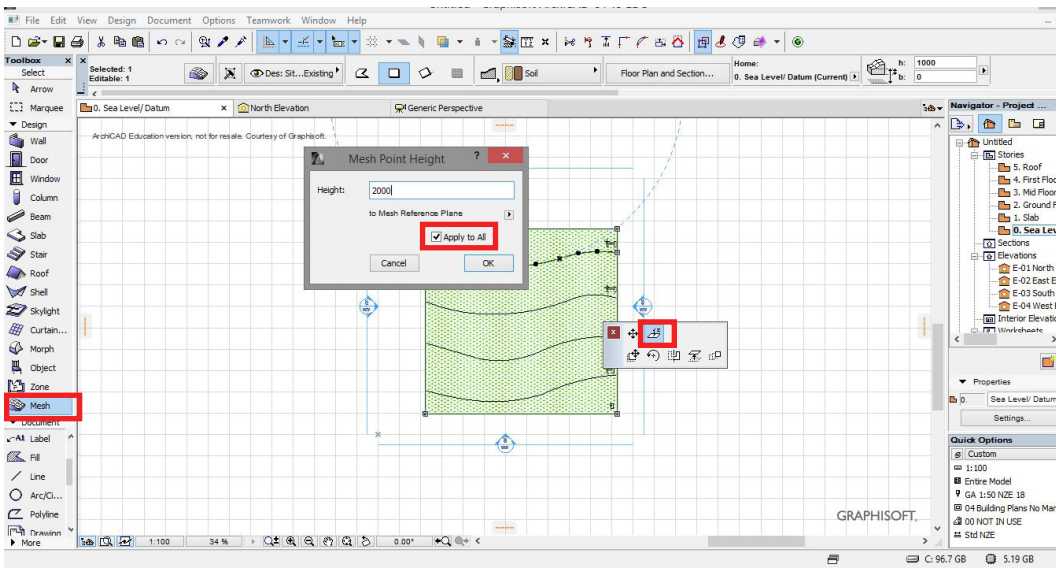
Open > Ok > Merge > (Place drawings on screen window)> OK



Mesh tool > Draw over top of contour lines

Making a Site Mesh.

Select the Mesh tool.



Select the mesh > Select Mesh Tool > Space Bar > Select Contour lines > Click mesh node (black dot) > Elevate Mesh > OK

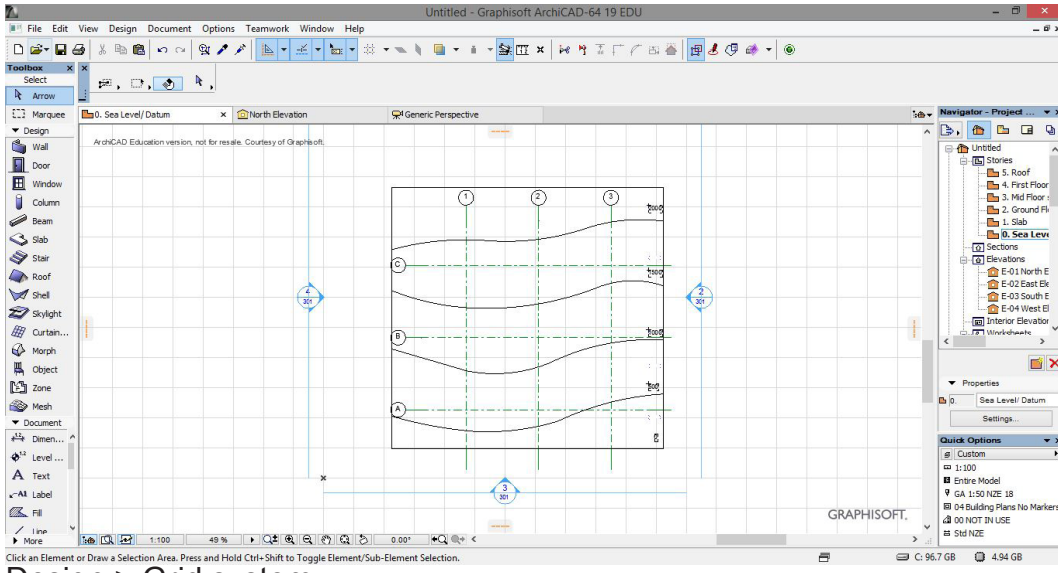
Adding contour heights.

Select the mesh so it is highlighted

Make sure the mesh tool button is selected.

Hold down spacebar and click the contour line.

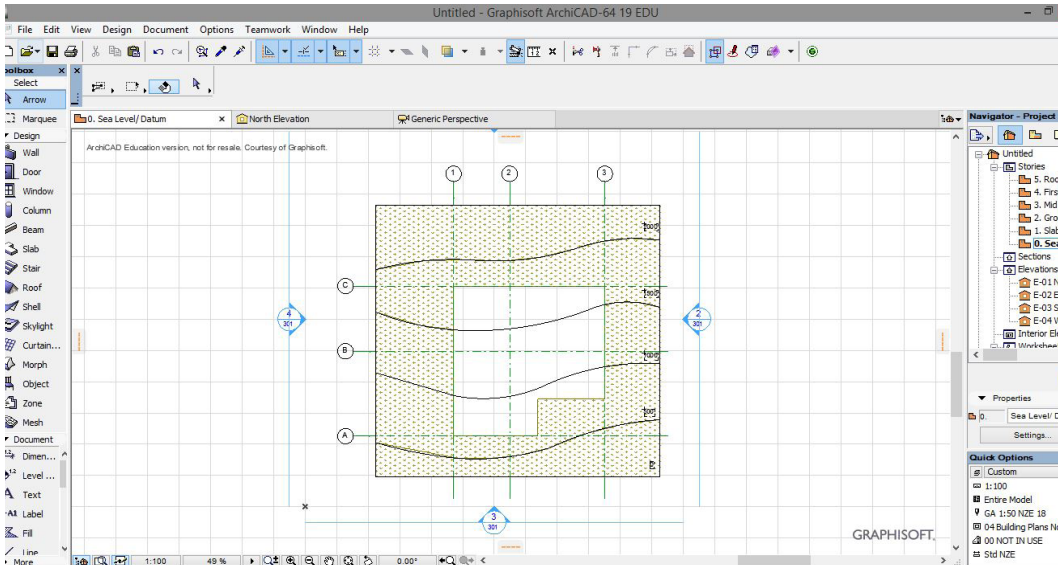
Type in Height.



Design > Grid system

Creating a grid system.

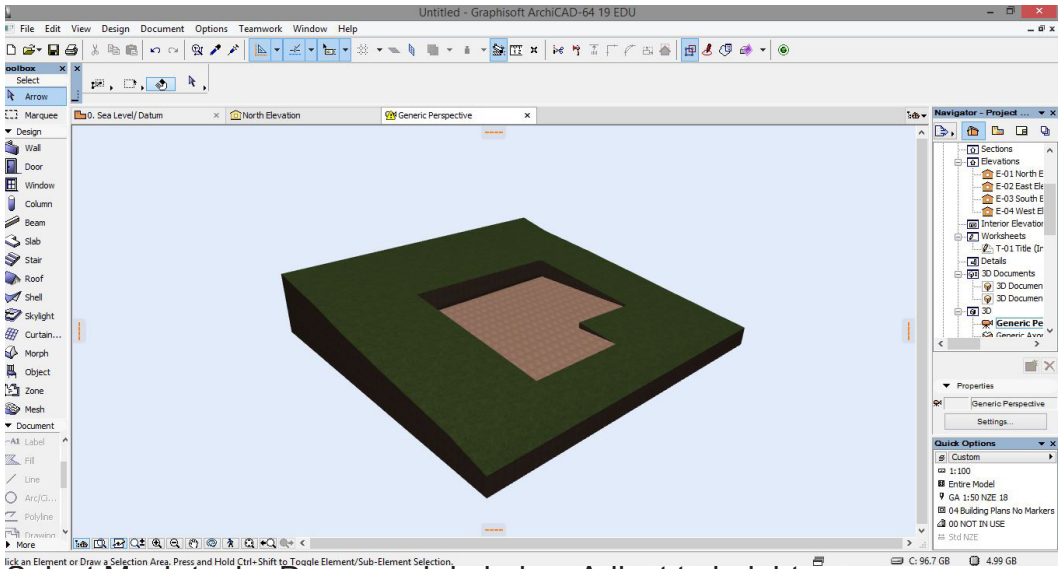
Once placed, the grid lines can be moved.



Select the mesh > Select mesh tool > Draw building foot print > Select create hole > OK

Creating a hole in mesh.

Mesh must be selected.

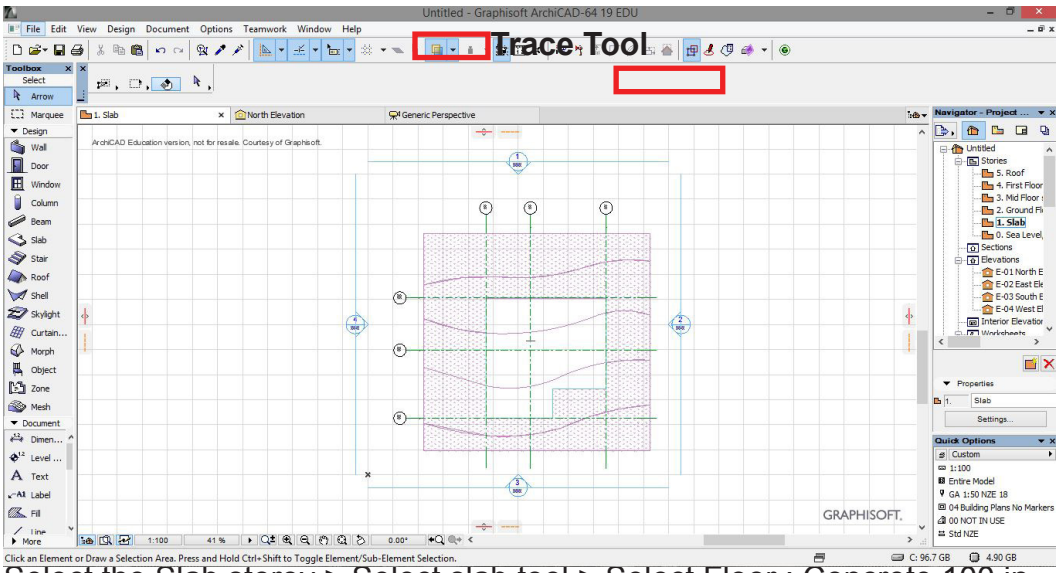


Select Mesh tool > Draw mesh in hole > Adjust to height.

Creating an excavated building pad.

Redraw a mesh inside the hole and adjust to height.

Note: Mesh nodes can be adjusted individually in 3d mode.

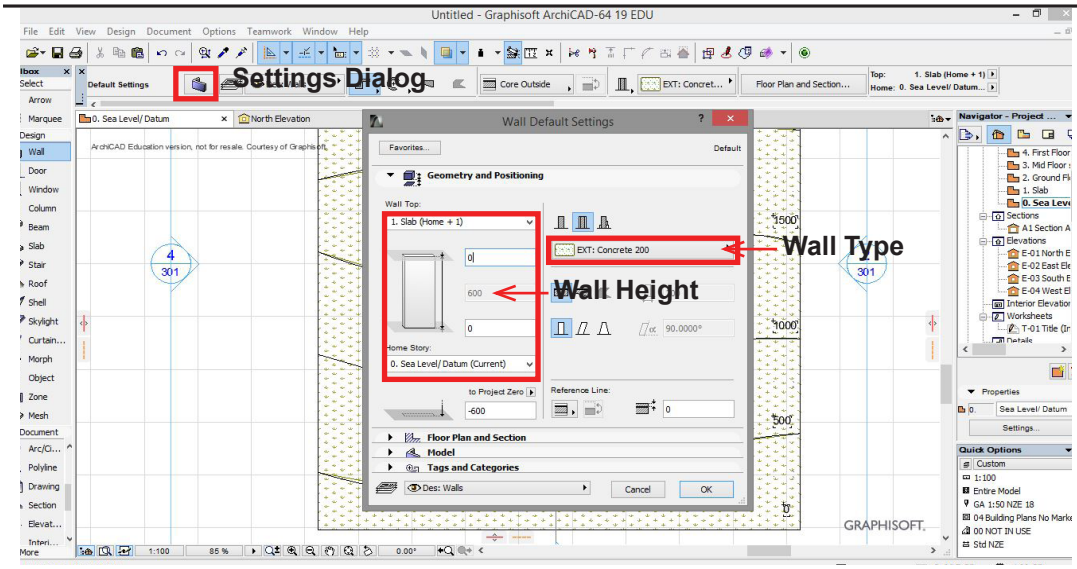


Creating a building slab

Note: The slab can be adjusted in the properties menu or the properties bar.

To see a trace of the below storey use the **Trace Tool**.

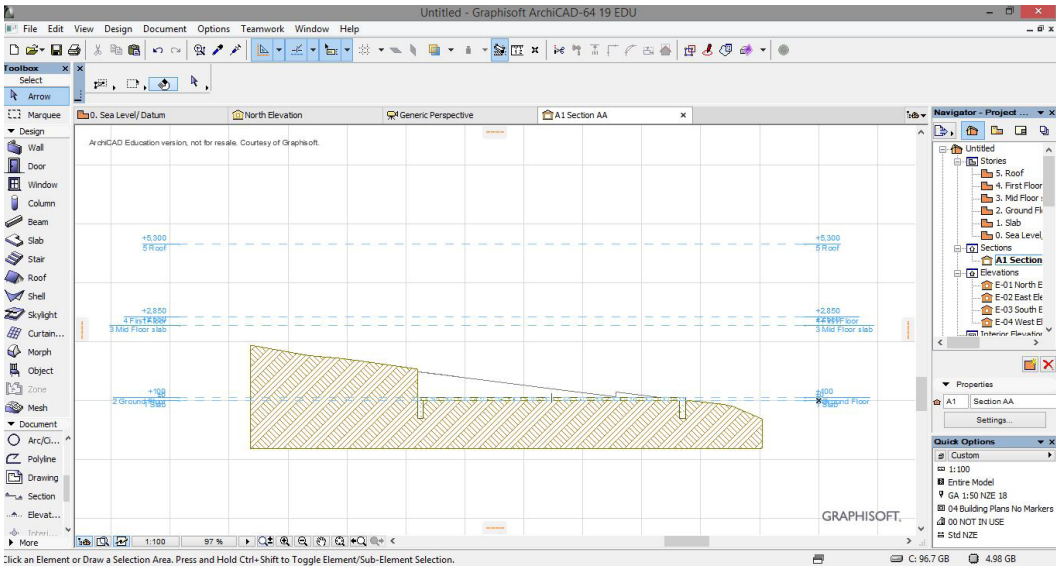
Select the Slab storey > Select slab tool > Select Floor : Concrete 100 in properties bar > Draw the slab.



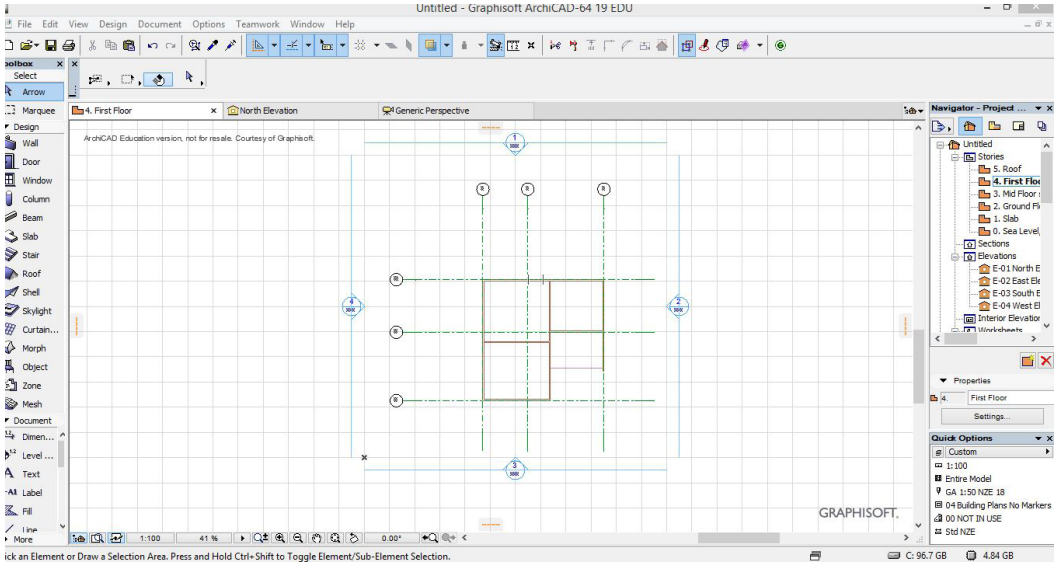
Creating Foundation Walls.

Note: The storey heights dictate the wall heights.

Select Wall Tool > Settings Dialog > Choose EXT : Concrete 200 for walll type.



Sectional View showing Floor slab, Foundation walls, Mesh and storey levels.

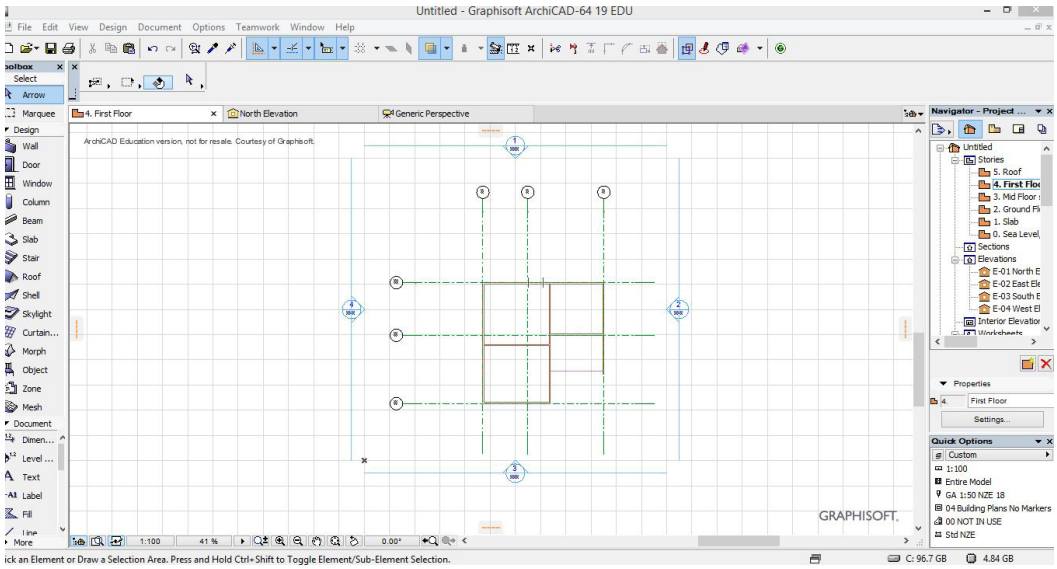


Select wall tool > Settings Dialog > EXT: Stud 90

Walls

The walls are the same as the above foundation walls.

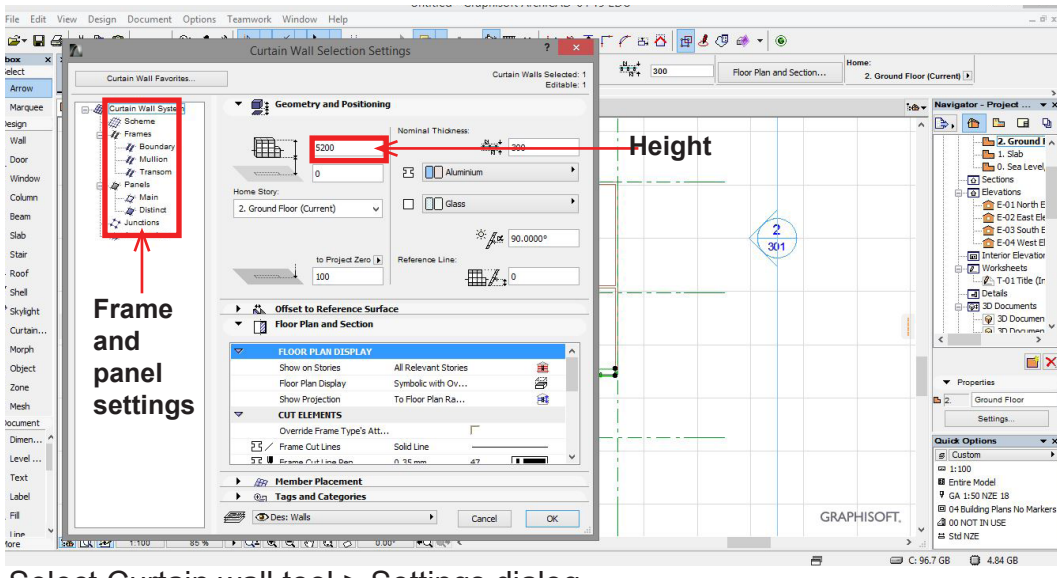
Make sure you are on the correct story level.



Select slab tool > Settings Dialog > Non Composite slab > 300 Thickness

Mid Floor Slab

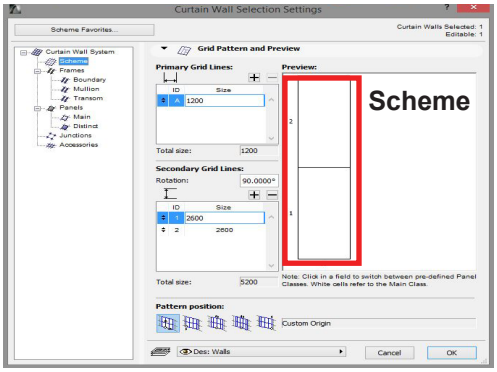
Adjust slab thickness in Dialog Settings.

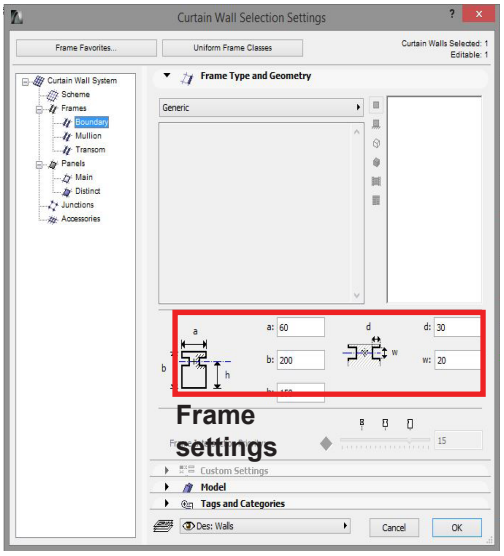


Select Curtain wall tool > Settings dialog

Curtian Wall Tool

Note: The scheme can also me edited in 3d.

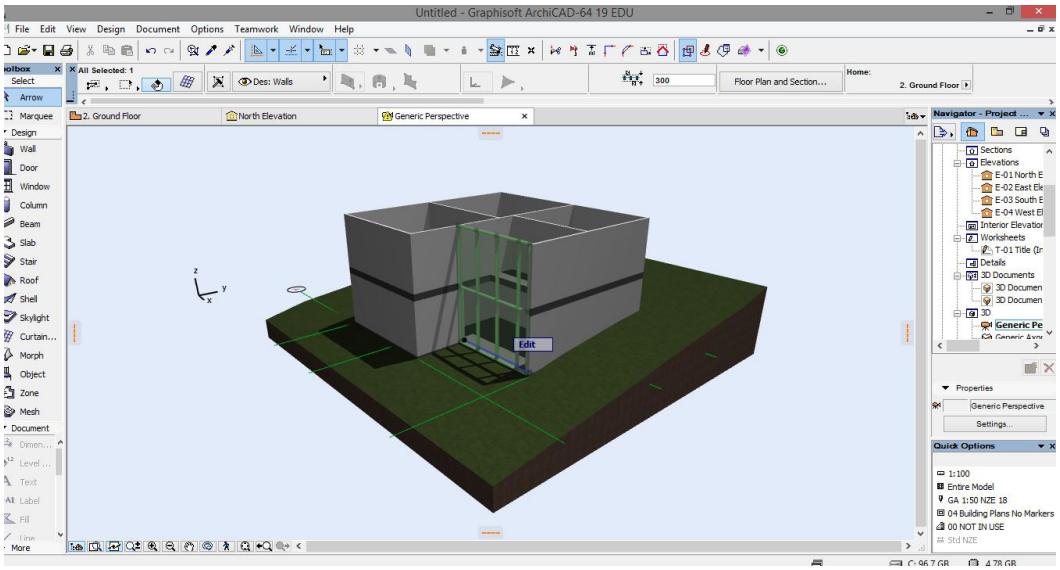




Curtian Wall Tool

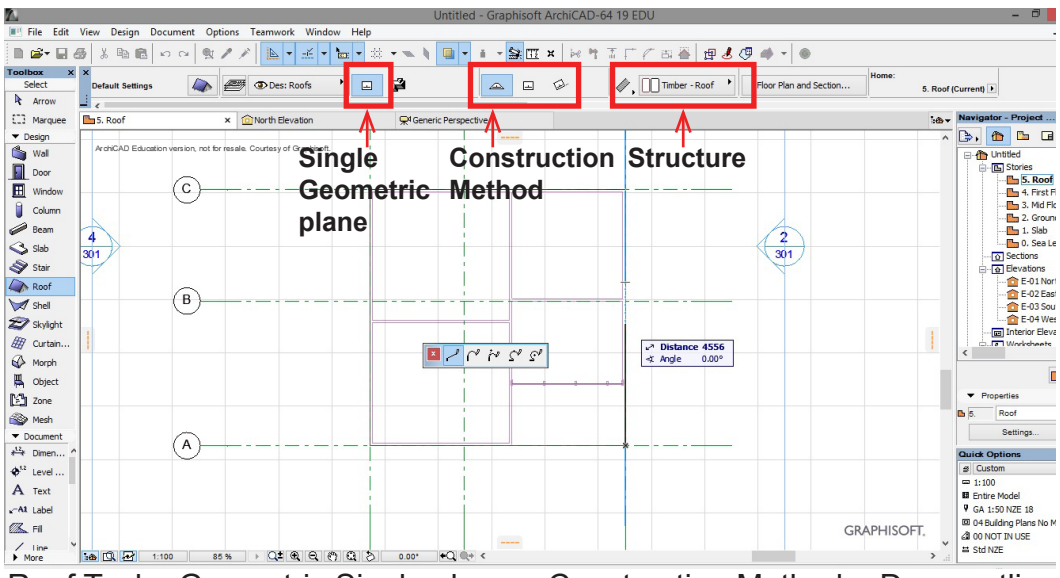
Within the settings dialog the frames can be adjusted and the scheme.

Select Curtain wall tool > Settings dialog > Scheme > Frames > Panels > OK



Curtian Wall Tool

3d showing option to edit curtain wall in 3d

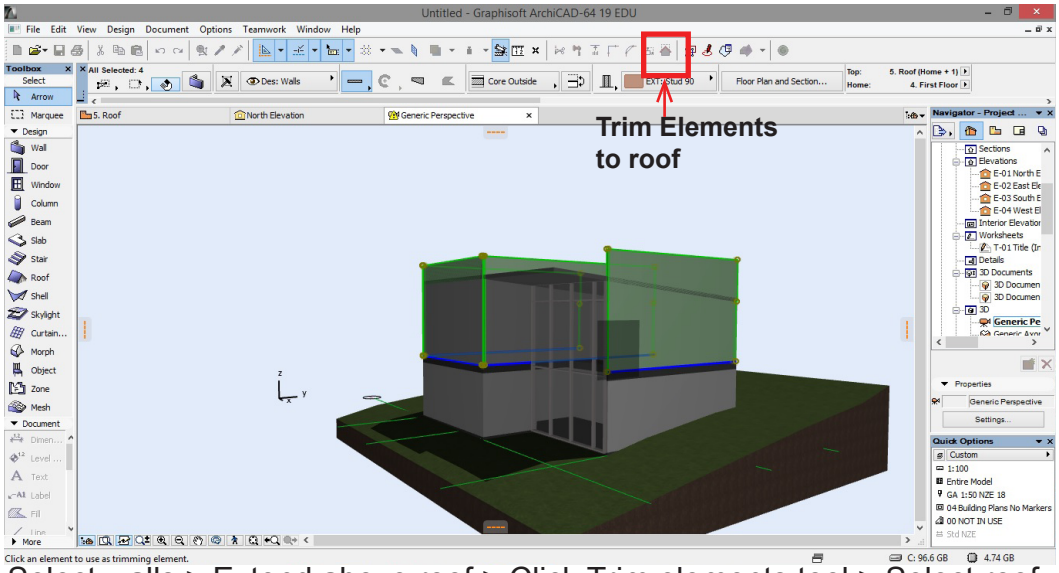


Roof Tool

Select the Roof level plan in the stories.

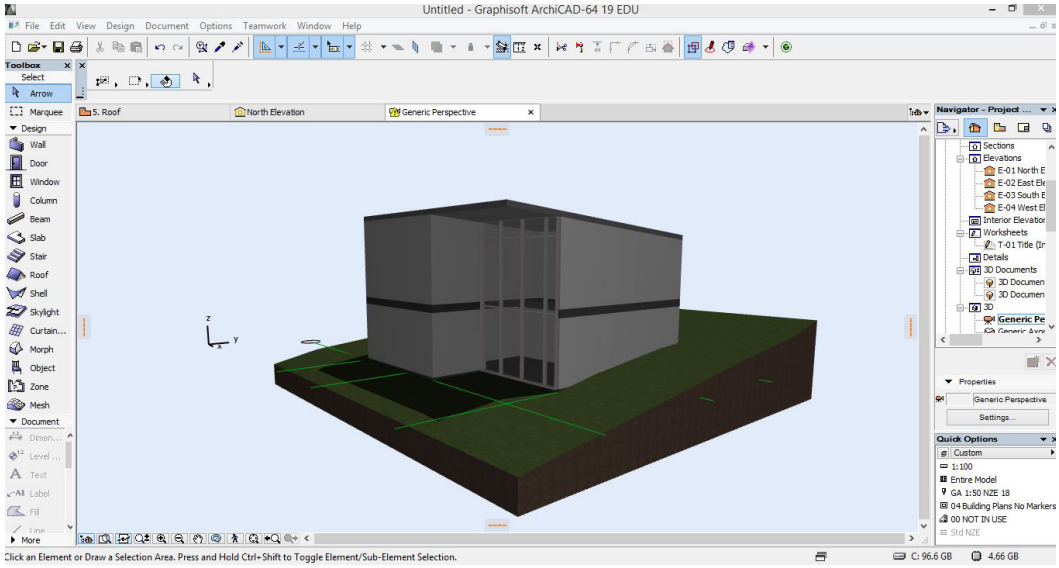
Create a **Monopitch roof**.

Roof Tool > Geometric Single plane > Construction Method > Draw outline on plan

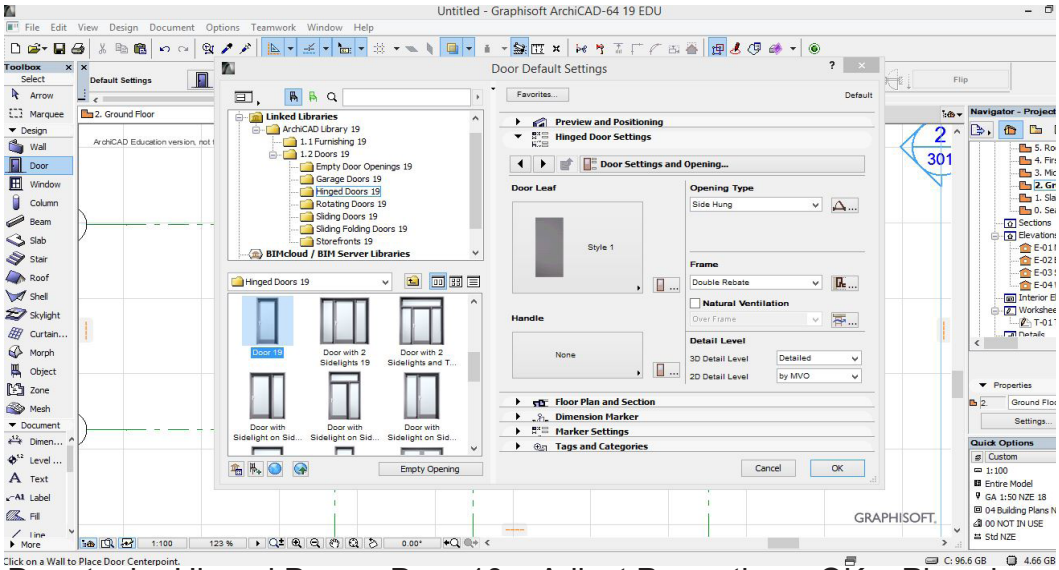


Note: To attach the walls to the roof, the walls must be higher than the roof. To change this drag the walls in 3d so they are past the roof.

Select walls > Extend above roof > Click Trim elements tool > Select roof > Enter



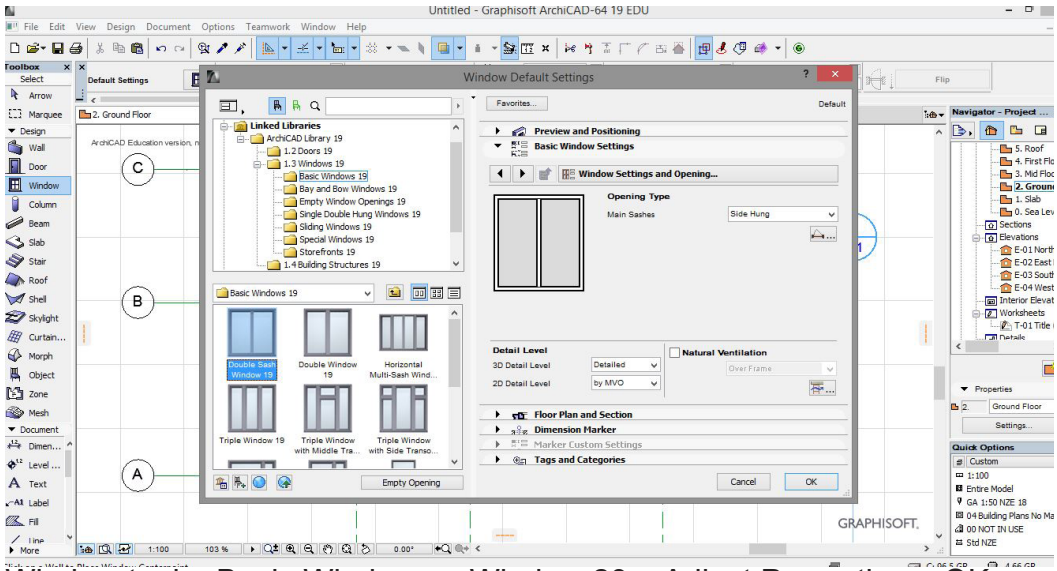
Trimed walls to roof



Doors

Select the door tool. Choose a door from the libraries and adjust the properties in the parallel menus.

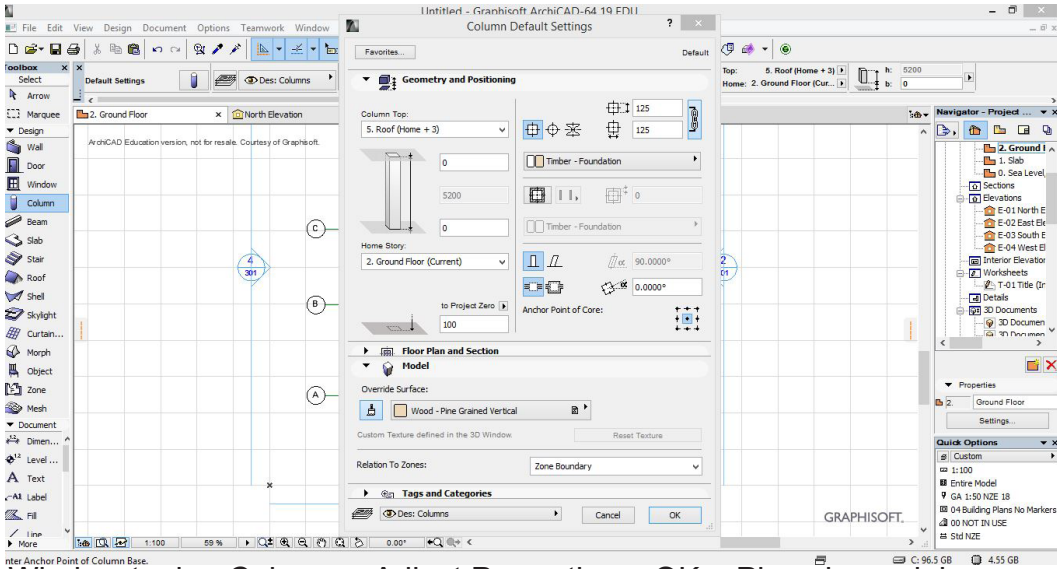
Door tool > Hinged Door > Door 10 > Adjust Properties > OK > Place in model



Windows

Select the Window tool. Choose a window from the libraries and adjust the properties in the parallel menus.

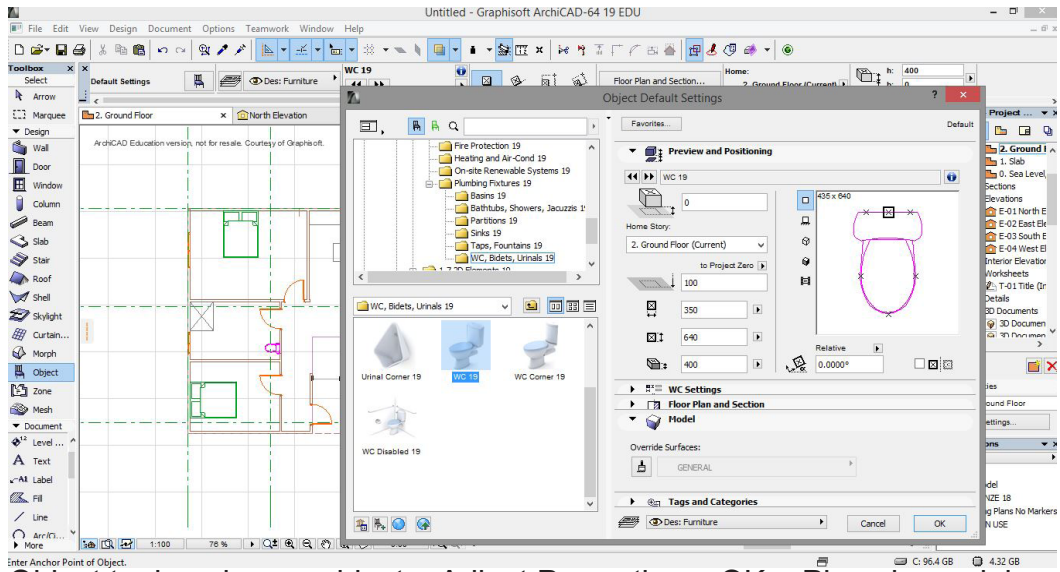
Window tool > Basic Windows > Window 29 > Adjust Properties > OK > Place in model



Columns

Select the Column tool. Adjust the height and size in the Settings dialog.

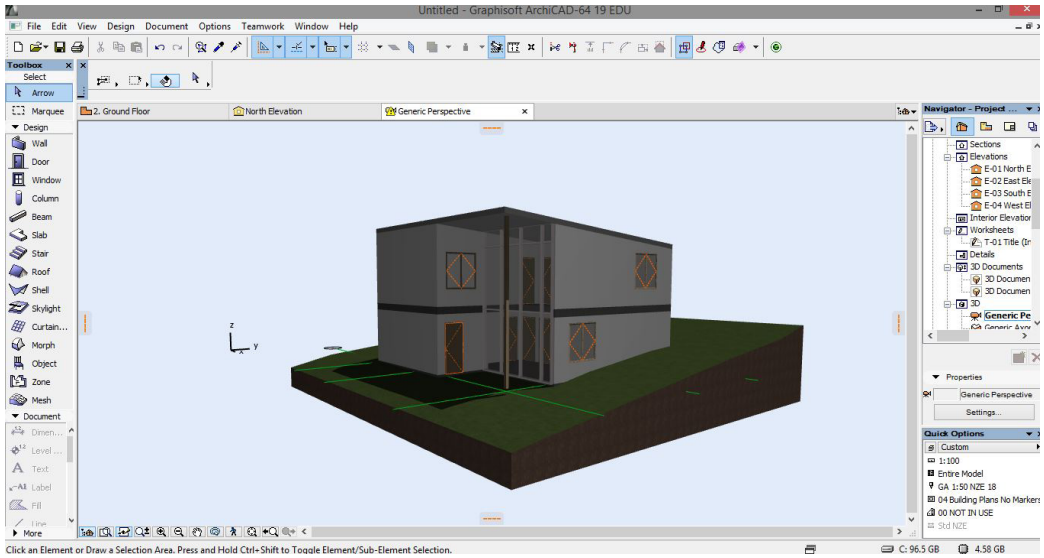
Window tool > Column > Adjust Properties > OK > Place in model



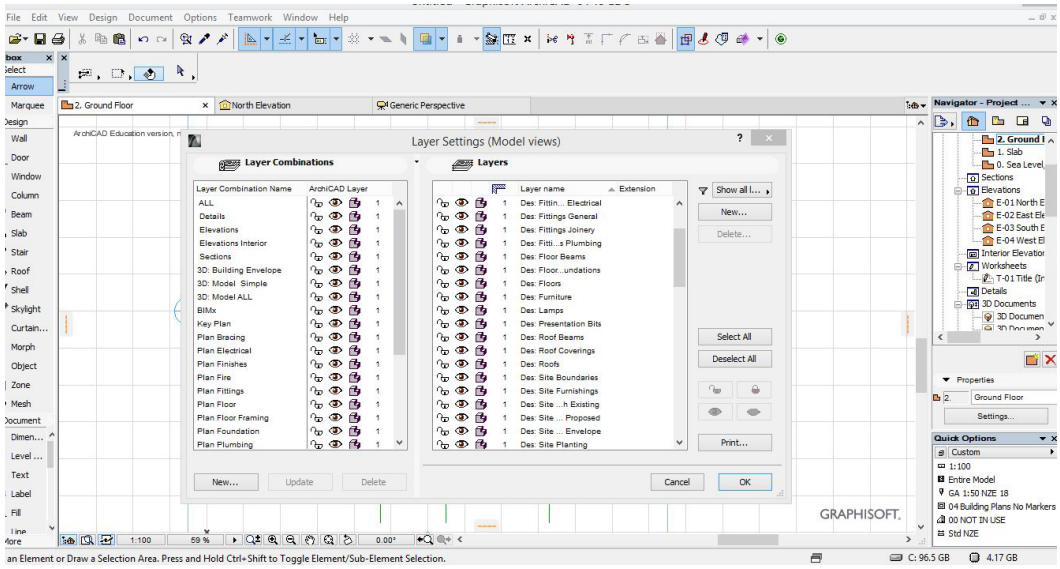
Objects

Select the Object tool. Find an appropriate object in the library Adjust the settings in the window.

Object tool > choose object > Adjust Properties > OK > Place in model



Now we have finished creating the model it is now time for the documentation side.

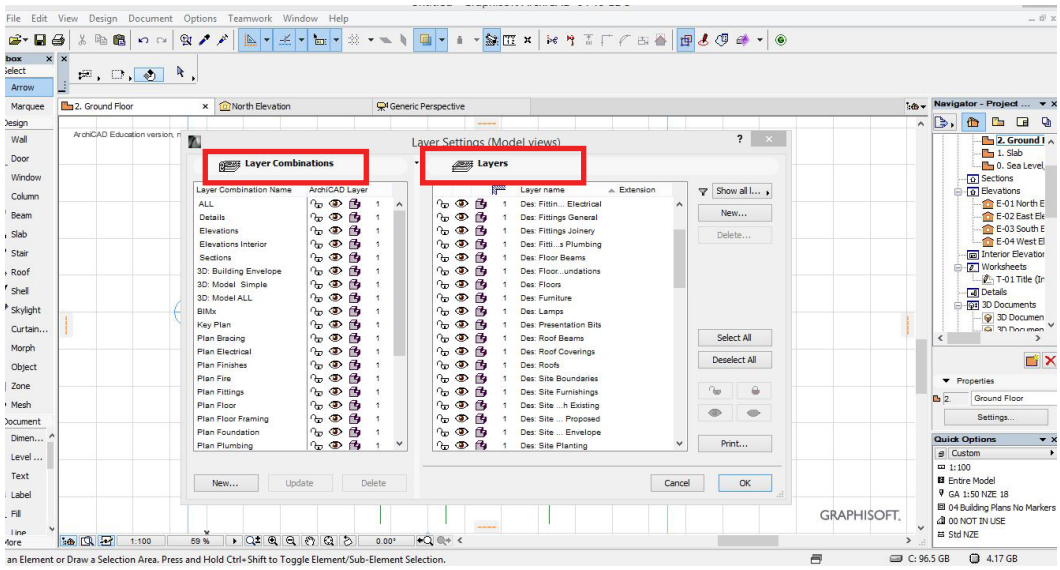


Document > Layers > Layer Settings

Layers

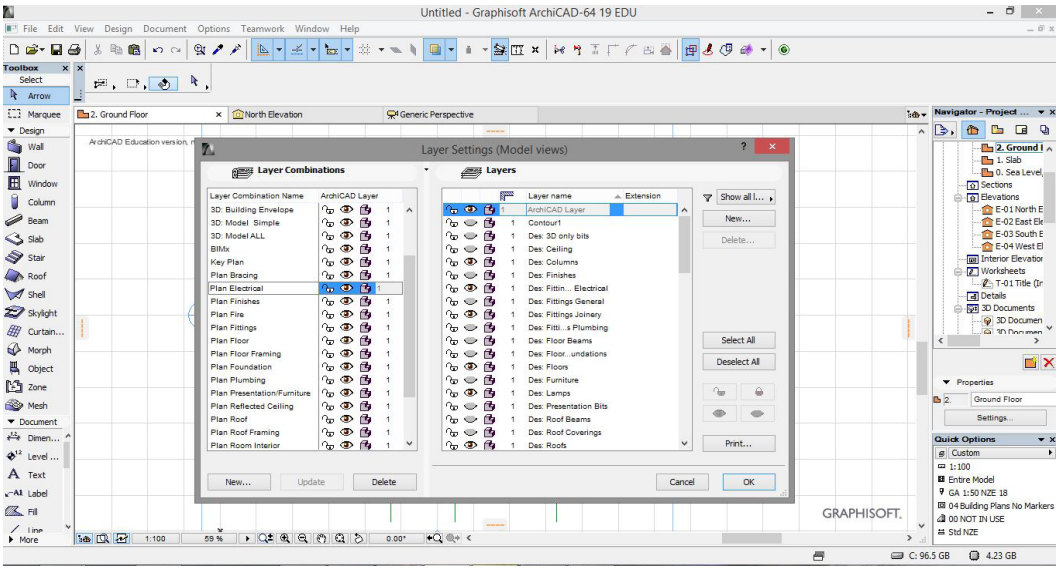
To understand extracting drawings from a working model we must first understand **'Layers'**

Layers are how different drawings show and hide different information.



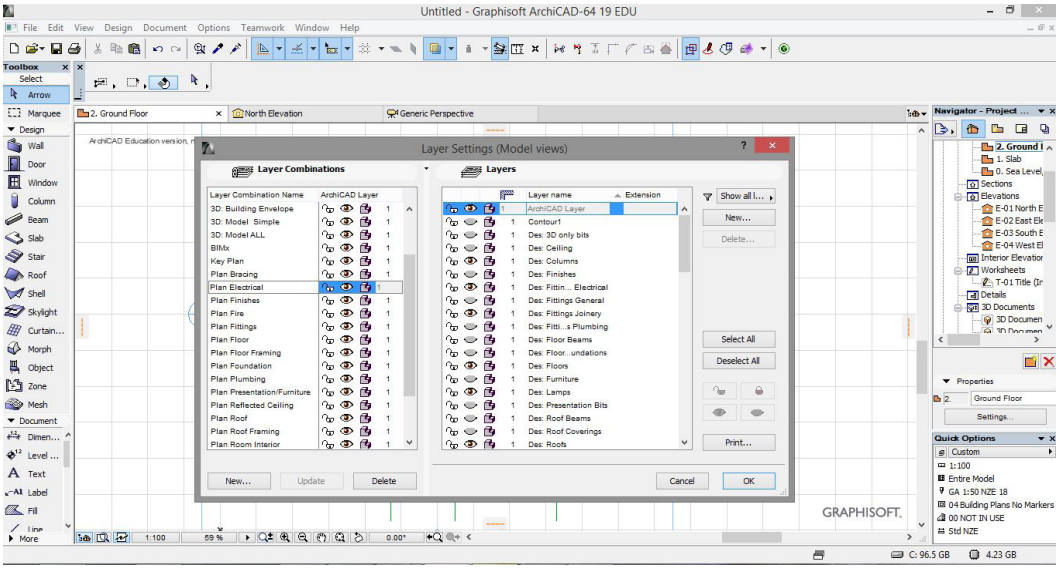
Each element, say a wall or roof can be placed on a layer. Either an existing layer or a new one which you can create.

The layer combinations only show the elements on particular layers that are relevant to that drawing.



For example if I wanted to create an electrical plan out of the model, I can click the ‘Plan Electrical’ in the layer combinations and all the elements only relevant to the electrical plan are shown.

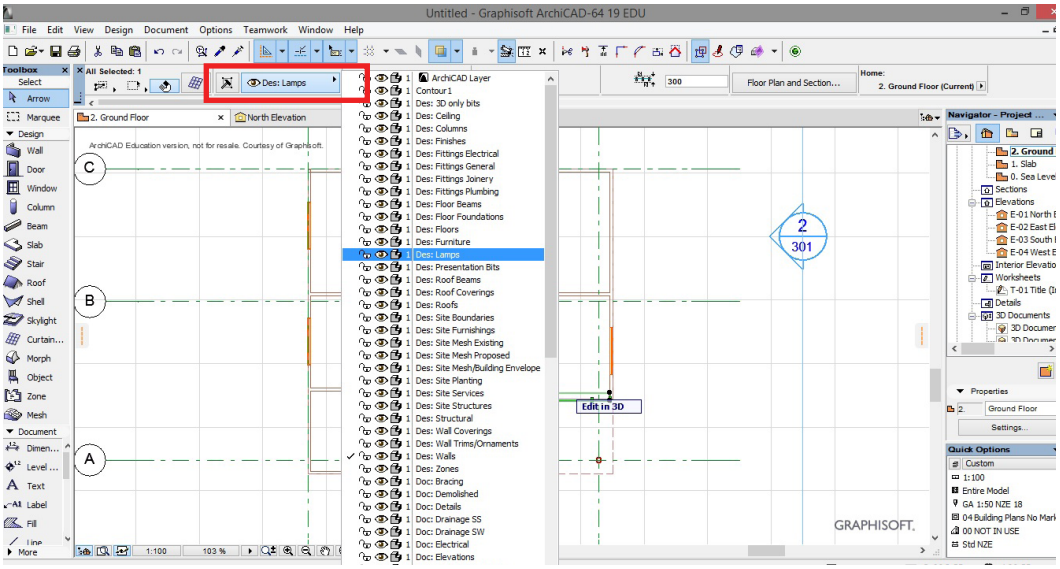
Note: The Eye shows what is hidden and what is shown.



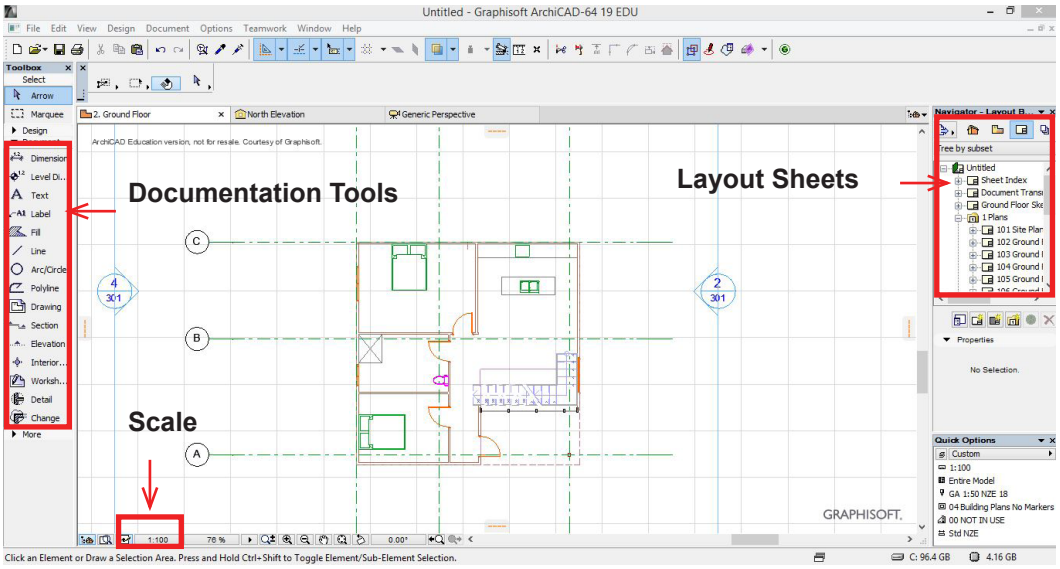
Layer Combinations

To make a layer combination, Select New, rename then on the layers click the eyes on the other layers so that only the layers that you want to show are open. Then click update.

Ctrl + L > (Layer combinations) New > Update > OK



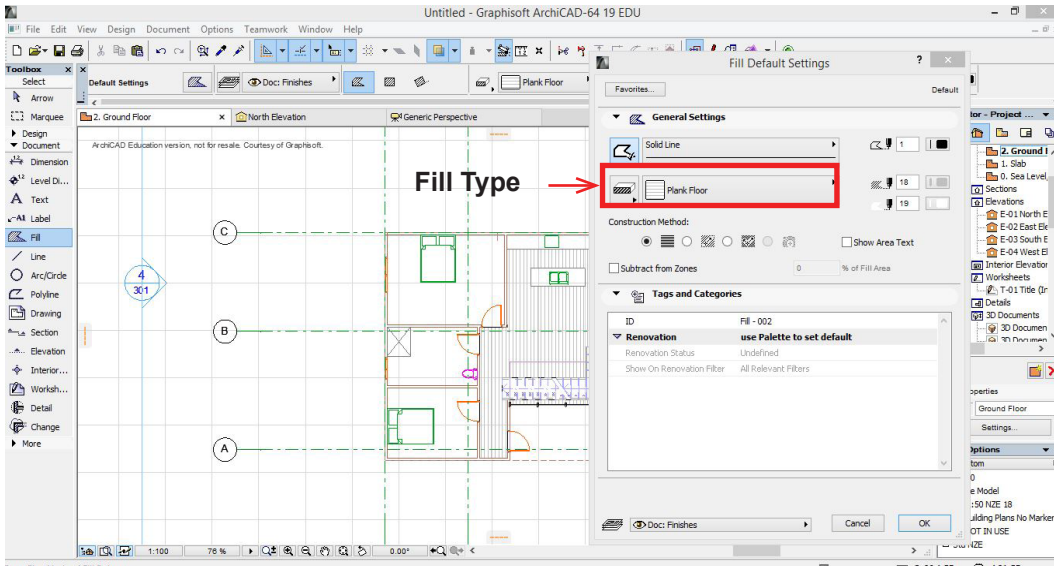
To place an element on the drawings onto another layer click the drop down menu in the properties bar.



Annotating a floor plan.

Under the documentation tools bar on the right hand side are the annotation tools.

They are mainly 2d elements which can be drawn on top of a drawings.

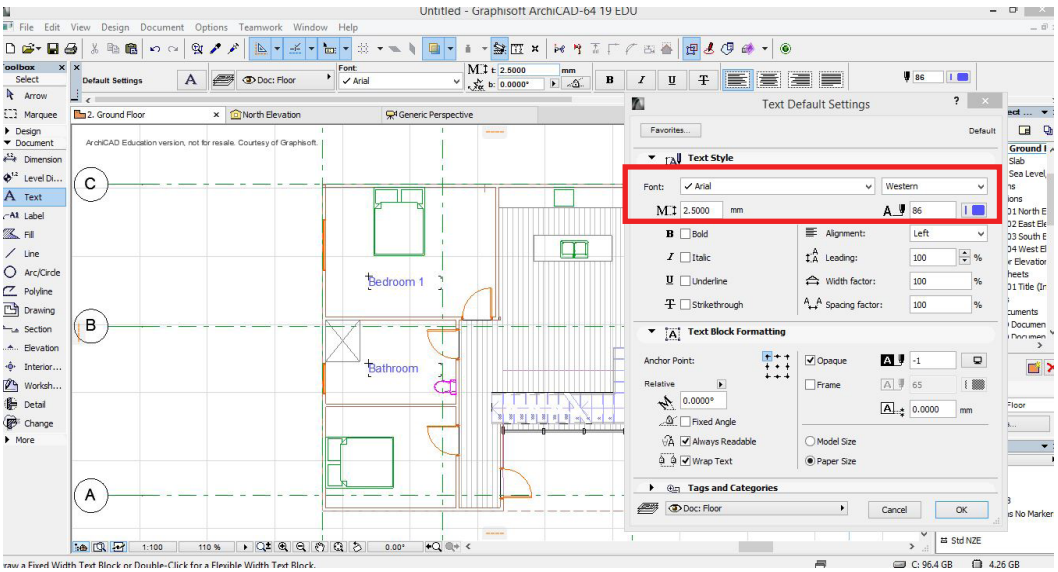


Fills

Applying fills in 2d.

The settings dialog shows the line colours and line weights. These can be adjusted to suit the drawings.

Select Fills tool > Settings Dialog > Choose Type > Ok > Draw on Drawing



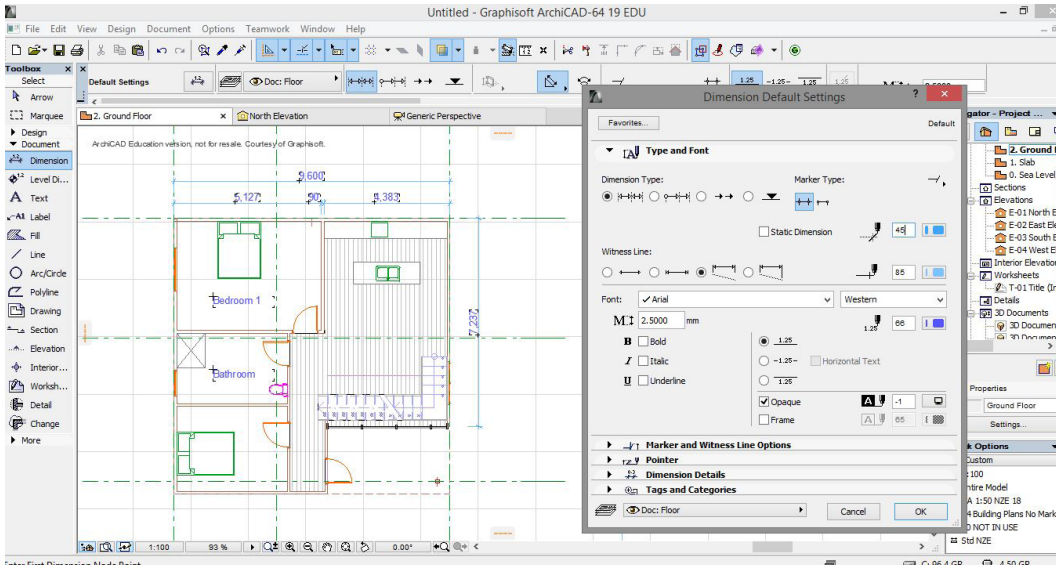
Text

Applying text in 2d.

Select Text tool > Settings Dialog > (adjust settings) Ok > Place on Drawing

Dimensions

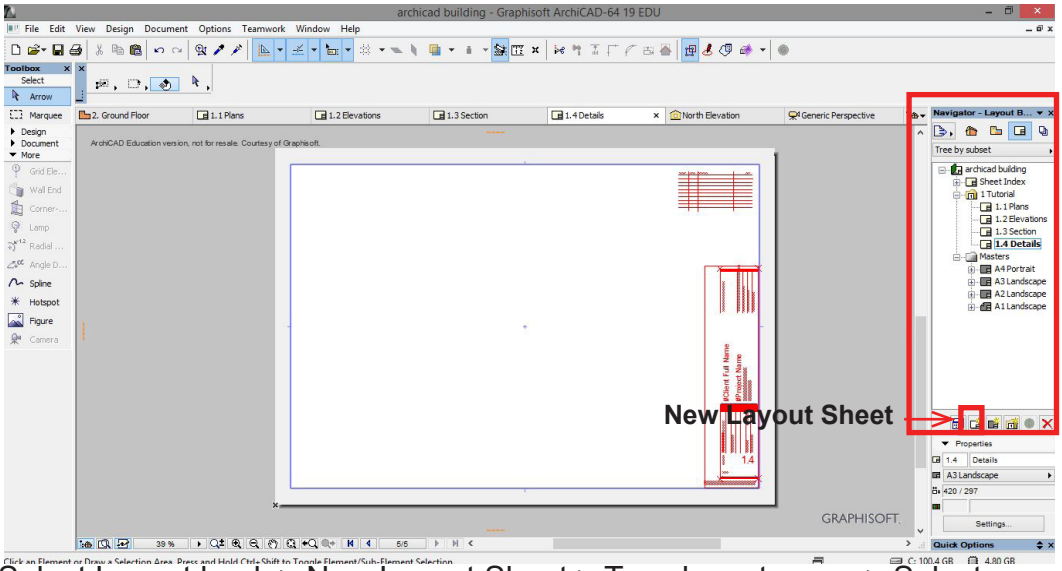
Applying dimensions in 2d for both plans sections and details.



Select Dimension tool > Settings Dialog (Adjust settings) > Ok > Place on Drawing

Layout Sheets

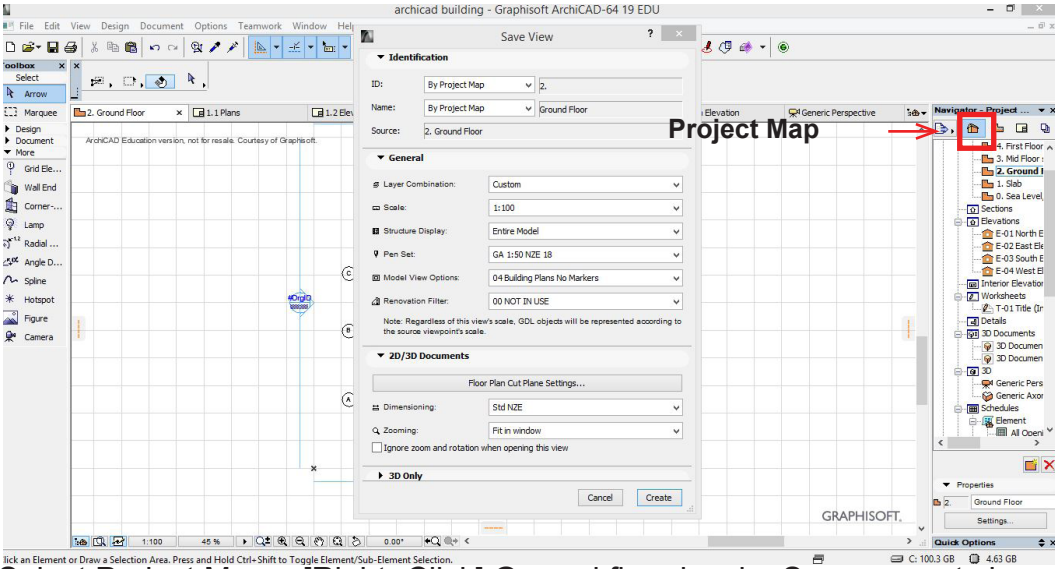
The layout sheets have the final drawings placed on them which can be saved as a pdf.



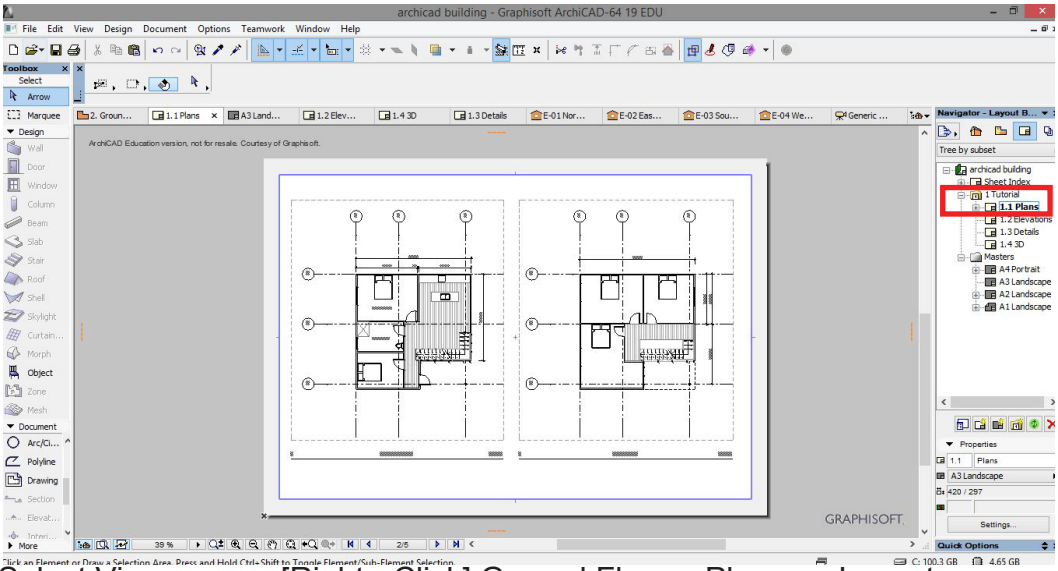
Select Layout book > New Layout Sheet > Type layout name > Select Sheet Size > Ok

In order to place a drawings on the layout sheet, first we must **Save the view**.

This prevents the drawings layers scale changing whilst working on the drawing.



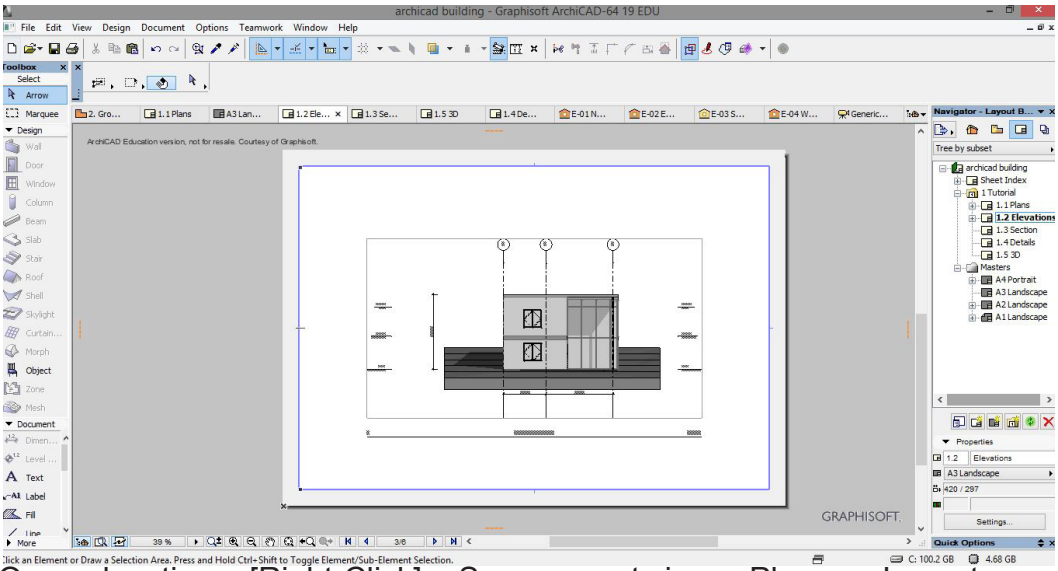
Select Project Map > [Right -Click] Ground floor level > Save current view > Create.



Select View map > .[Right - Click] Ground Floor > Place on Layout

Placing a Drawings on the layout sheet.

Once the view is saved it appears in the view map. Now this views layers and scale cannot be altered even when working on the drawing. It can now be placed on the layout.

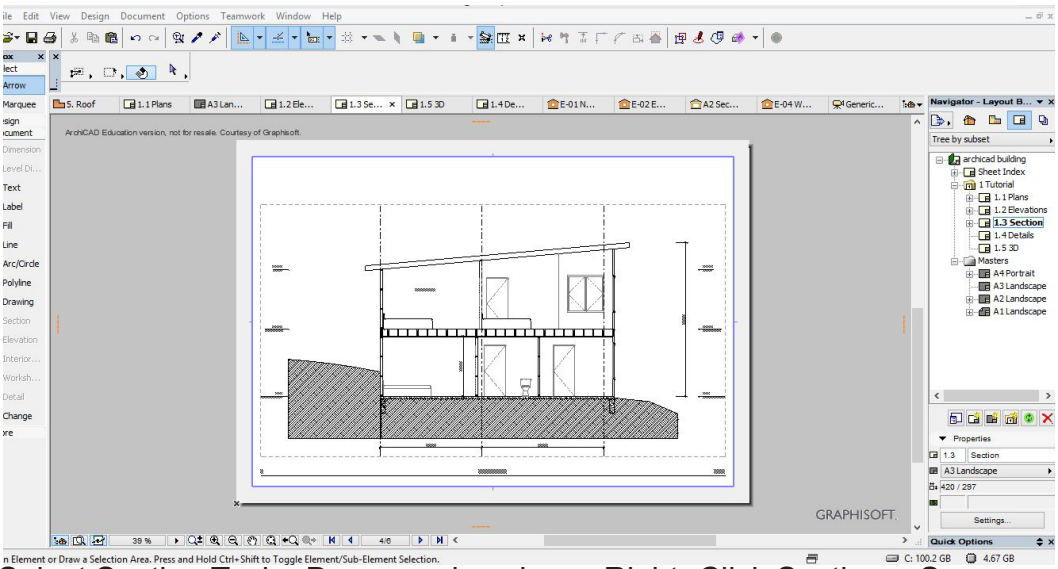


Open elevation > [Right-Click] > Save current view > Place on Layout

Creating elevations and placing them.

Elevation markers are already placed on the drawing plan. Placing an elevation view is exaclty like placing an other drawing on a layout as stated above.

Note: If there are no elevation markers use elevation tool

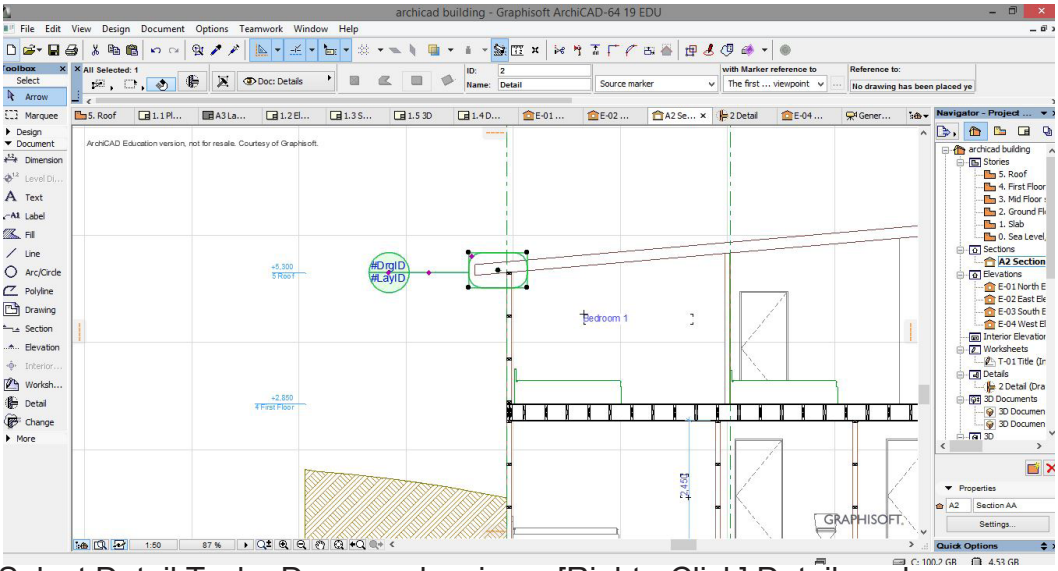


Select Section Tool > Draw on plan view > Right -Click Section > Save Current View > Place on Layout

Creating a section

A section can be cut through the model. To edit the section and add documentation elements use the Line and fill tools.

Note: Cadimage add on is excellent for documentation. Go to archicad to download students get it free

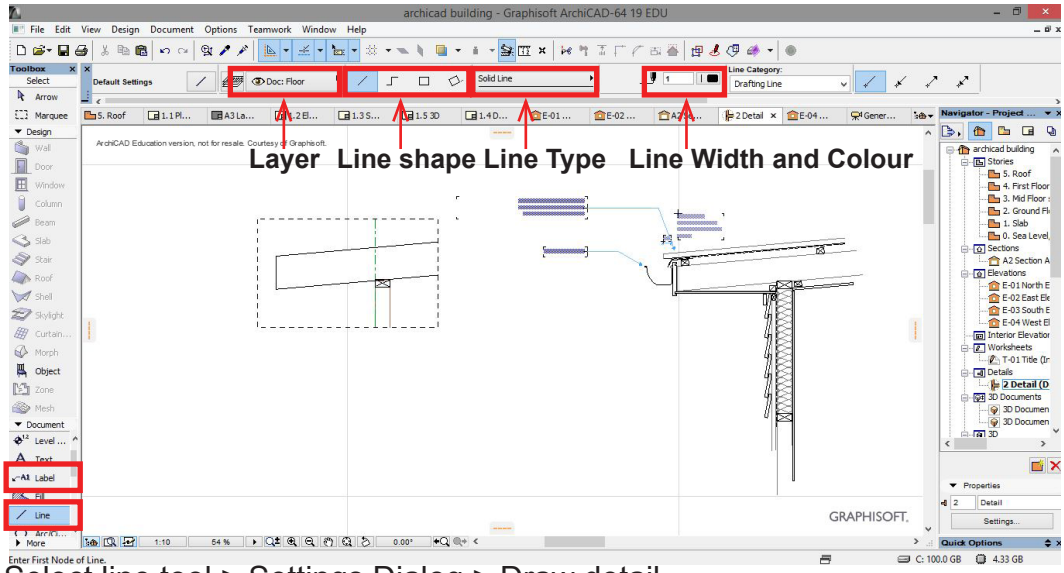


Select Detail Tool > Draw on drawing > [Right - Click] Detail marker > Open Drawing

Detail Markers

Note: Like the section and elevation markers, the drawing number and layer ID are generated once placed on a sheet.

Crtl - G is to make a group. Grouping lines together can create elements needed to draw a detail. Then Copy paste.



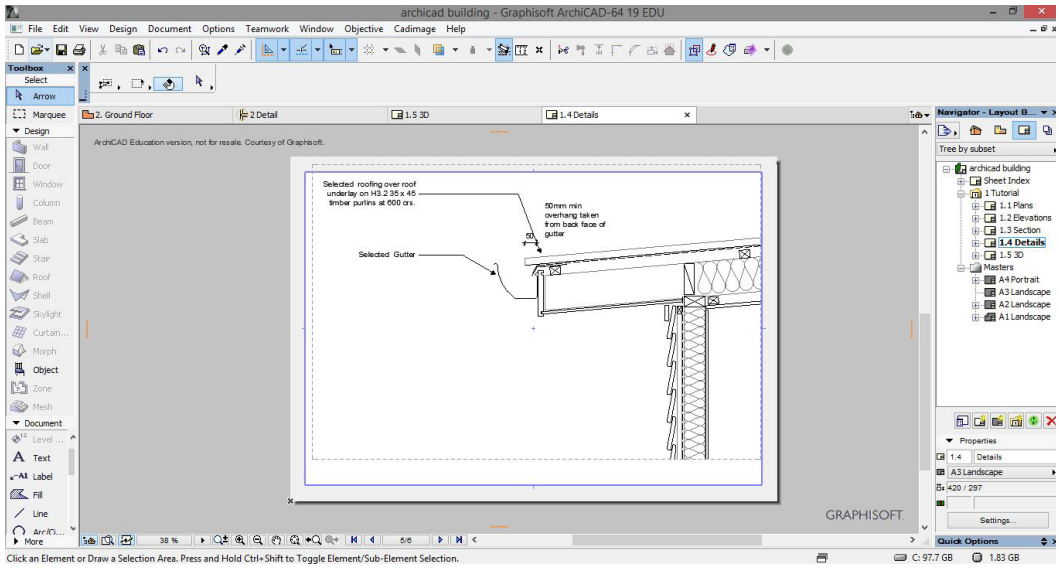
Select line tool > Settings Dialog > Draw detail
Select label tool > Settings Doalog > Draw label

Detail Markers

To draw the detail the line tool is used generally used.

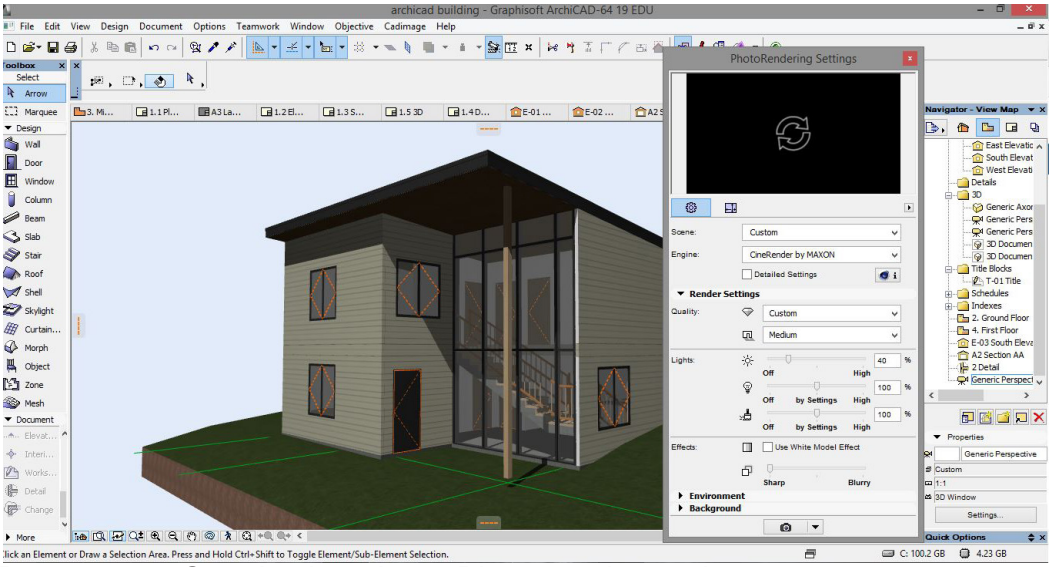
On the properties bar or settings dialog, the line properties can be adjusted.

The label tool is used to annotate the drawing.



Save Current view > Place on Layout

Placing Detail on Layout



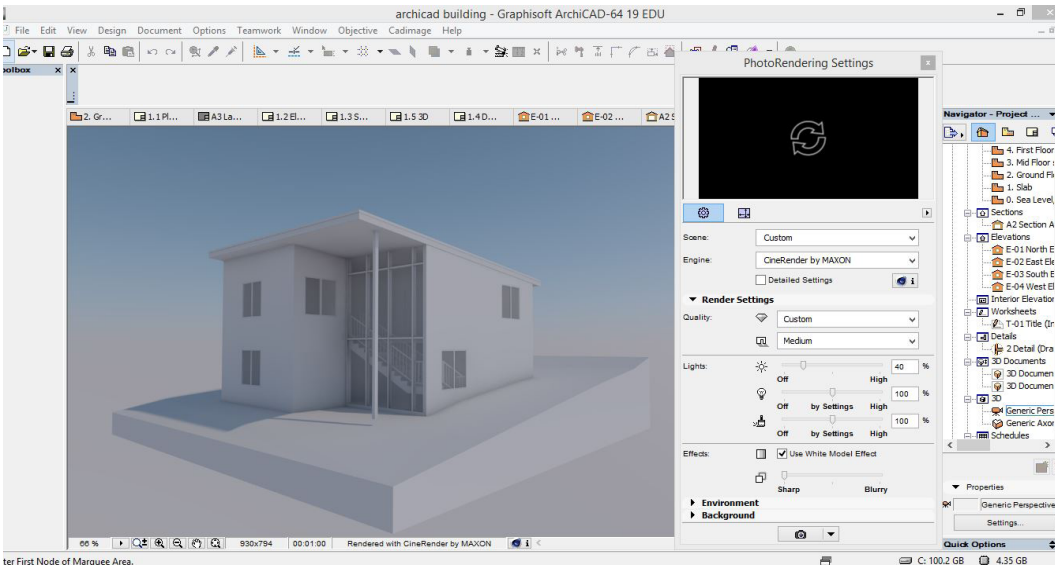
Document > Creative imaging > Photo render settings

Rendering

Open Model in 3d view.

Choose angle that render is to be of.

Save view.



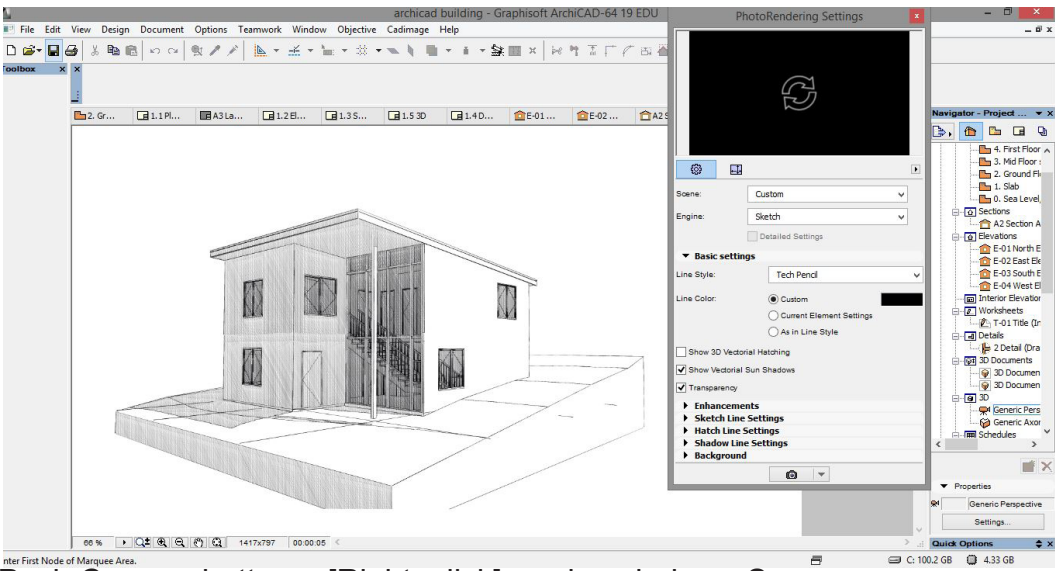
Push Camera button > [Right -click] render window >Save as..

Cine render

Make sure Cinerender is the render engine

To do a clay render select Use white Model

Adjust size and resolution in Size tab.



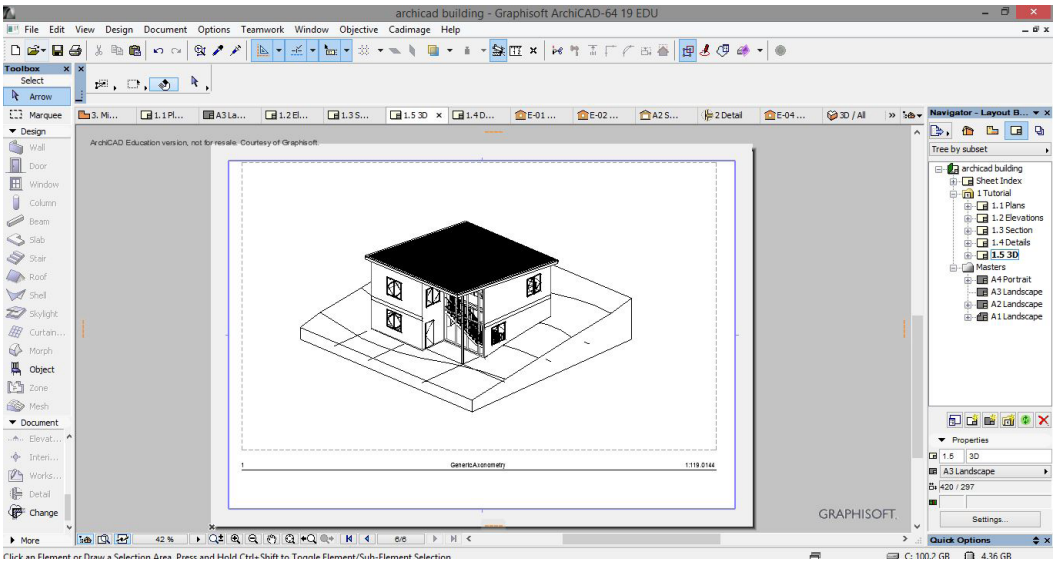
Push Camera button > [Right -click] render window >Save as..

Sketch Render

Make sure Sketch is the render engine

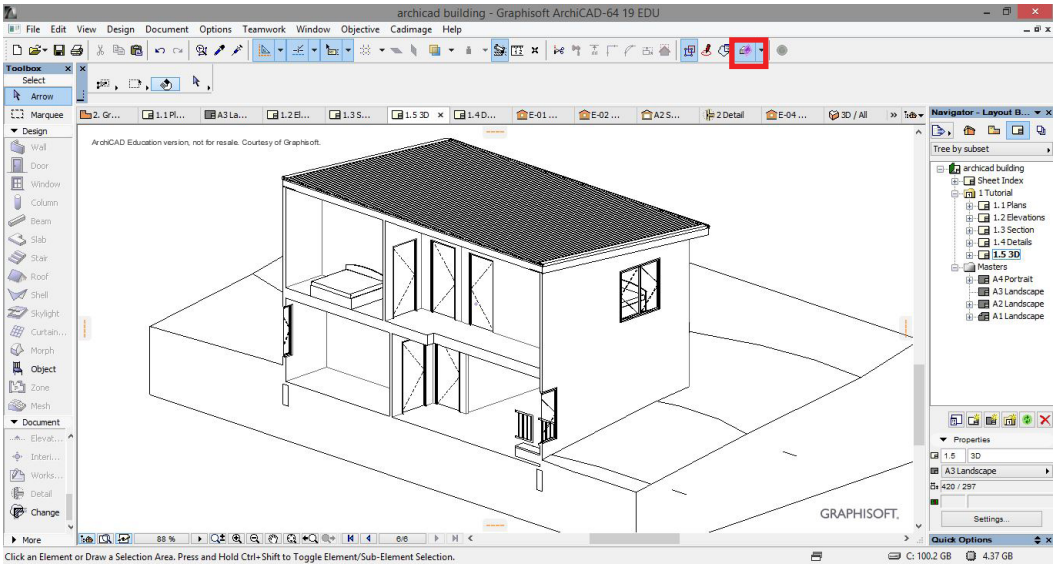
Adjust settings

Adjust size and resolution in Size tab.



Hidden line Axonometric

View > 3d view options > Axonometry > Select Vectorial Engine > Select Hidden Line > OK > Save Current view > Place on Layout



3d Cross section

3d cross sections can be rendered or left as a line drawing.

The cross section tool must be used in 2d first.

Select 3d Cross section tool > Create Custom cutting plane > Draw the cross section line > View in 3d