

Graphic Skills Portal

Technique Handouts

2

VISUALISING



Creating a street section using Illustrator

**URBAN
GRAPHICS
SKILLS**

Creating a street section using Illustrator



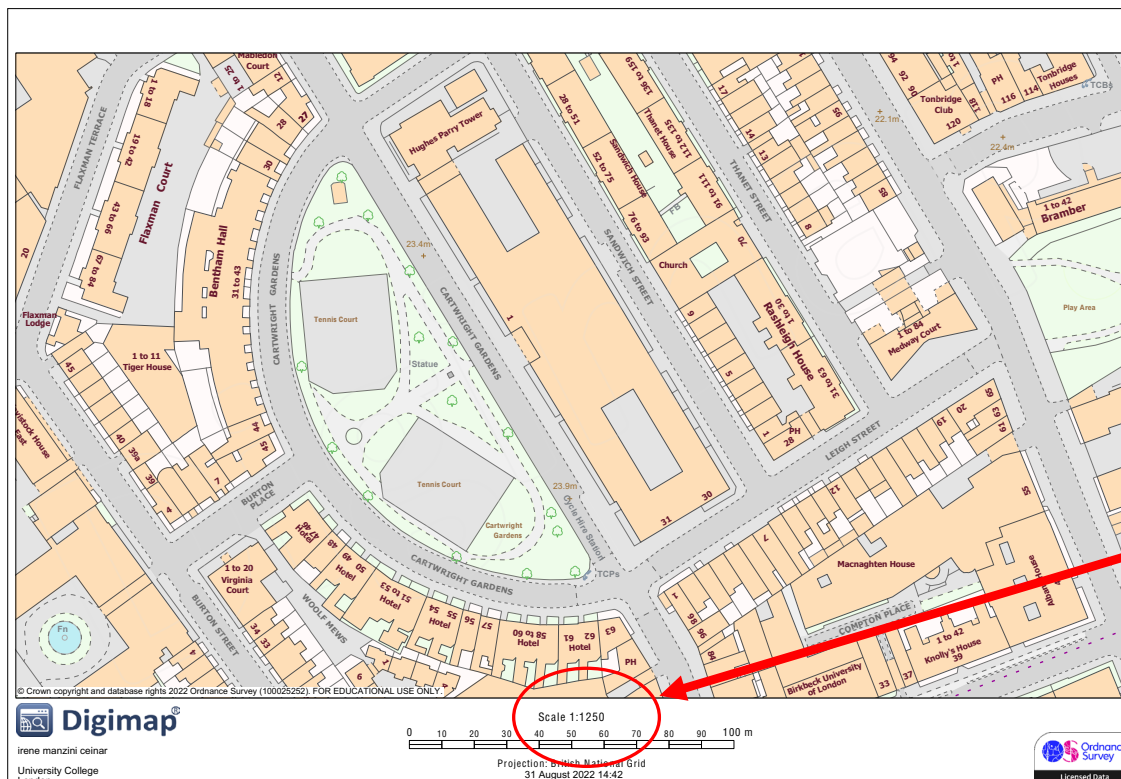
Creating a section using Adobe Illustrator: Use an existing base map or a scanned sketch and create a street-section using Illustrator.

1. Drag and drop your file into Illustrator > set the list of the layers: the base map or sketch should be the lowest layer and locked (you can even add a bit of opacity), then you need another layer on which you'll be tracing.
2. On Layer 2, use the **Pen Tool** to draw.

Let's start!



Drag and drop a sketch or a map (such as a map from Digimap) and use it as a base map for creating a section in Illustrator



NB. An important element is the SCALE. You should know that Digimap exports in A4 paper size, and you always have the scale mentioned at the bottom of the map. This is fundamental to draw the height of the building (and the right height of the storeys) later in the section.

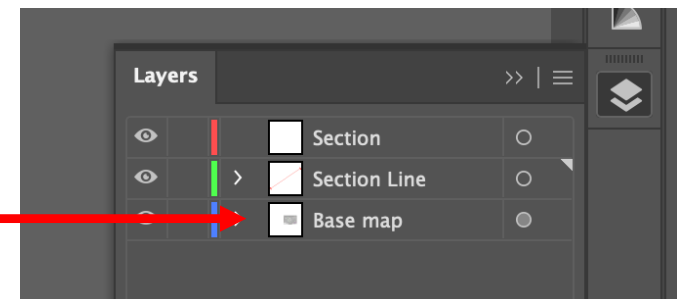
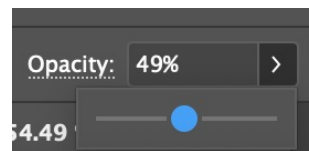
In this case, the scale is **1:1250**



Open the map in Illustrator.

Drag and drop your file into Illustrator > set the list of the layers:

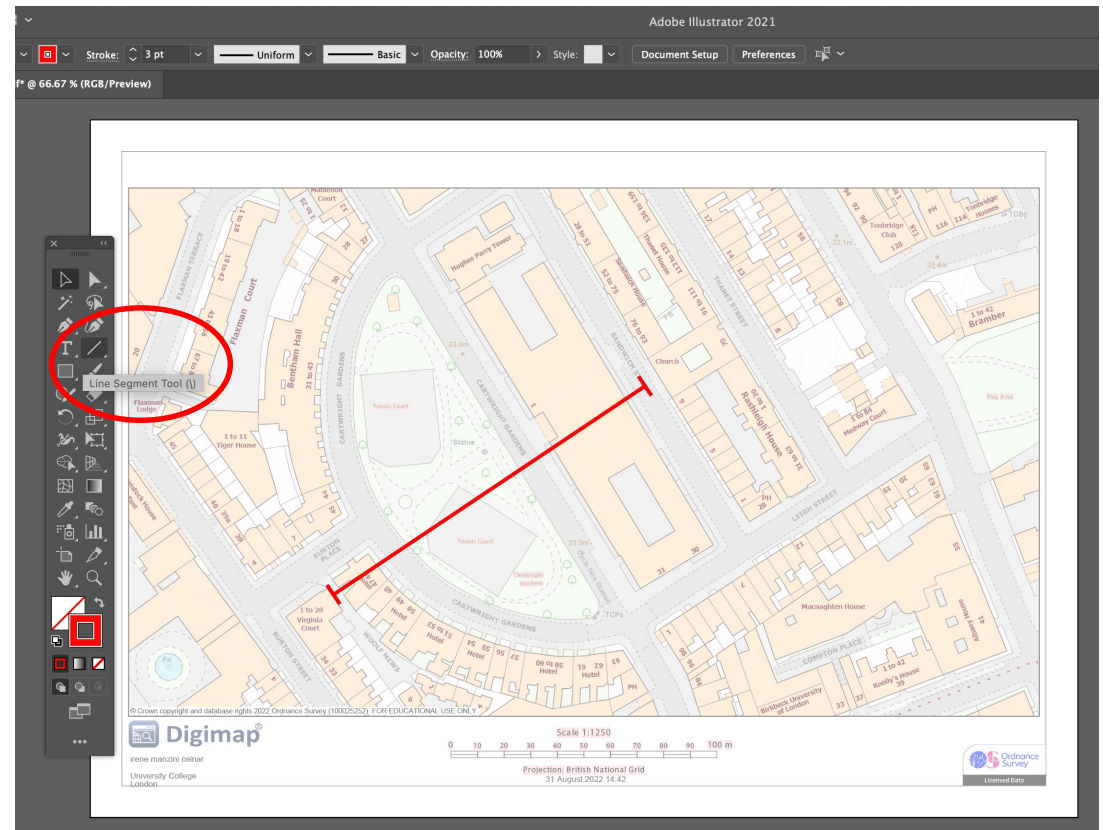
1. the base map or sketch **should be the lowest layer** (you can even add a bit of opacity),
2. then you need another layer on which you'll be tracing "Section".
3. And a layer where you'll draw the "Section Line"







The first thing to do is to set the **SECTION LINE** using the **Line tool**: a special line placed on the drawing which **indicate the area of the drawing through which an imaginary cut has been made to reveal internal details.**

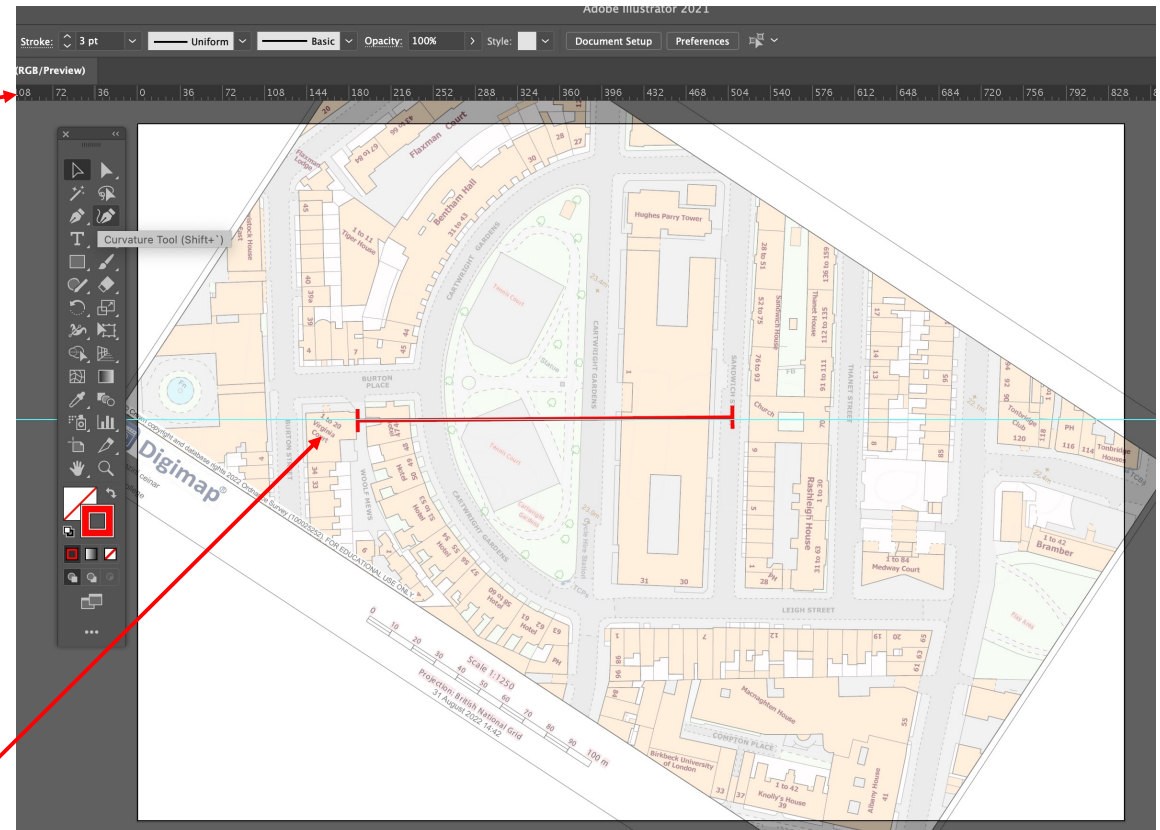
Note: it will be easier (especially if you are not familiar with sections) to cut buildings as much perpendicular as possible, to avoid distortions when drawing the section.





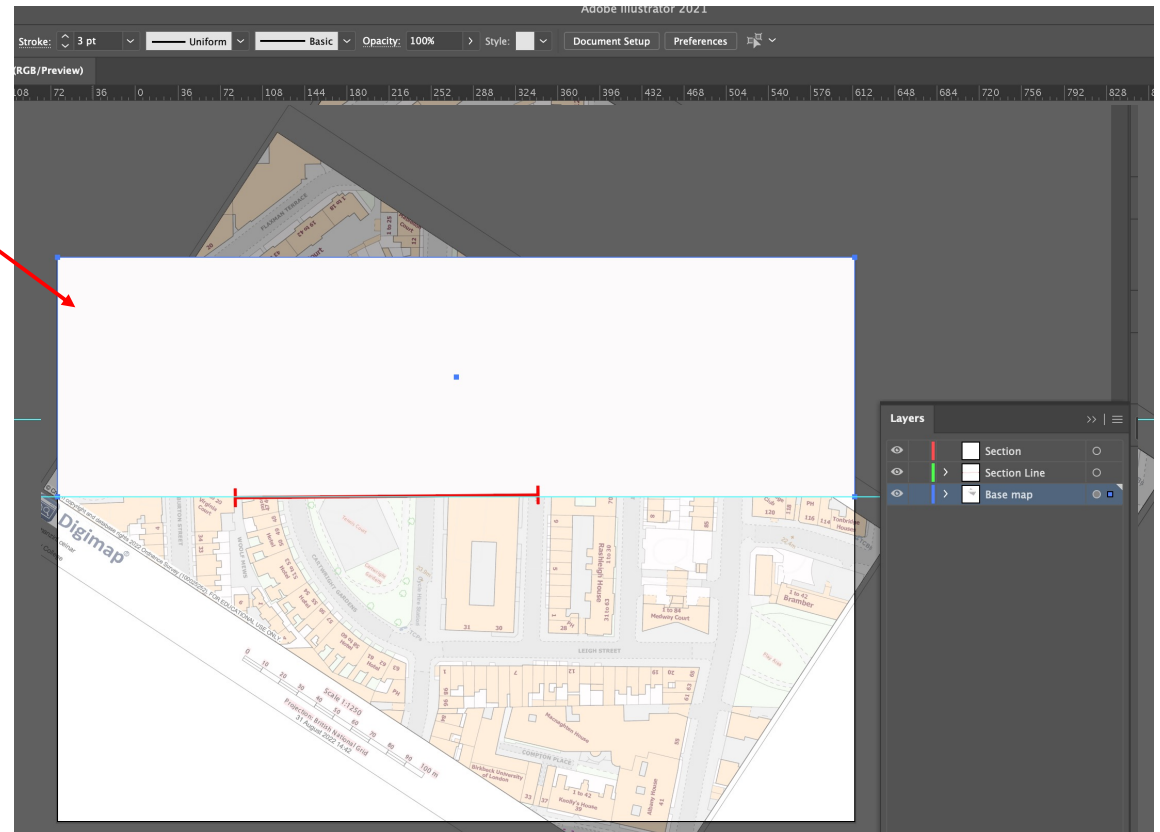
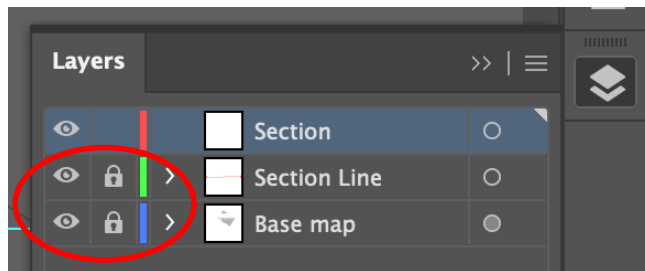
Then, for your convenience, let's rotate the image accordingly to the Section Line:

1. Open View > Rulers > Show Rulers. 
2. Rulers will appear. From the top ruler, drag a line on your drawing: this is an invisible baseline that will help you with the section.
3. Then, select EVERYTHING and rotate everything together by pressing R and start rotating with the cursor.
4. It will take a bit of try (rotate-move-rotate again), but be patient and try to align the section line (red) with the ruler baseline (light blue) 





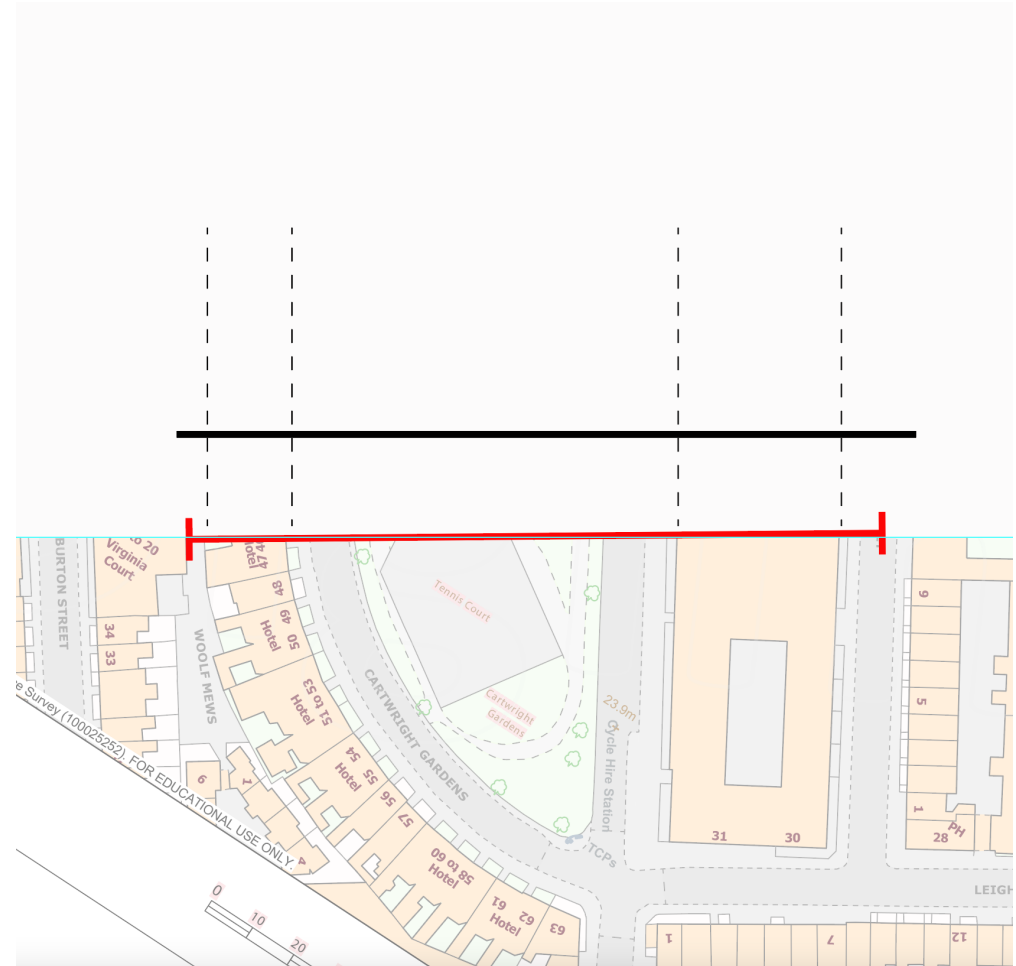
On the layer “base map” create a white box to cover the base map ONLY on the upper part of the **Section Line**. This will help to not get confused when drawing the section. Now, **lock** “base map” and “section line” layers, and stay on “Section”





Now, let's start drawing the section.

1. Trace a horizontal straight line using the **Line tool** + keep pressing **Shift** to go straight: This will be the GROUND of the section.
2. Trace vertical lines every time the Section Line touches the orange buildings: These will be the guidelines to draw the buildings in the section.
3. Now, we should calculate the height of the buildings in **SCALE**.





To calculate the height of the buildings (and of each storey) in the drawing, you should consider the scale of the basemap (if you never scaled it).

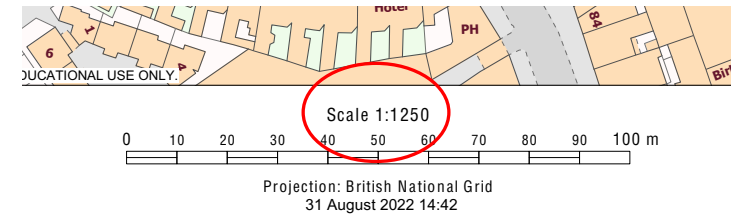
1. Go to

https://www.ginifab.com/feeds/cm_to_inch/scale_converter.html

2. In the calculator, add:

- the Scale Ratio **as in the baseline**: 1250
- Real Length as the average height of a storey: **3m**
- Scale Length will appear as consequence – NOTE to have this in **cm**

3. **So, now you know that each storey in your section should be 0.24 cm**

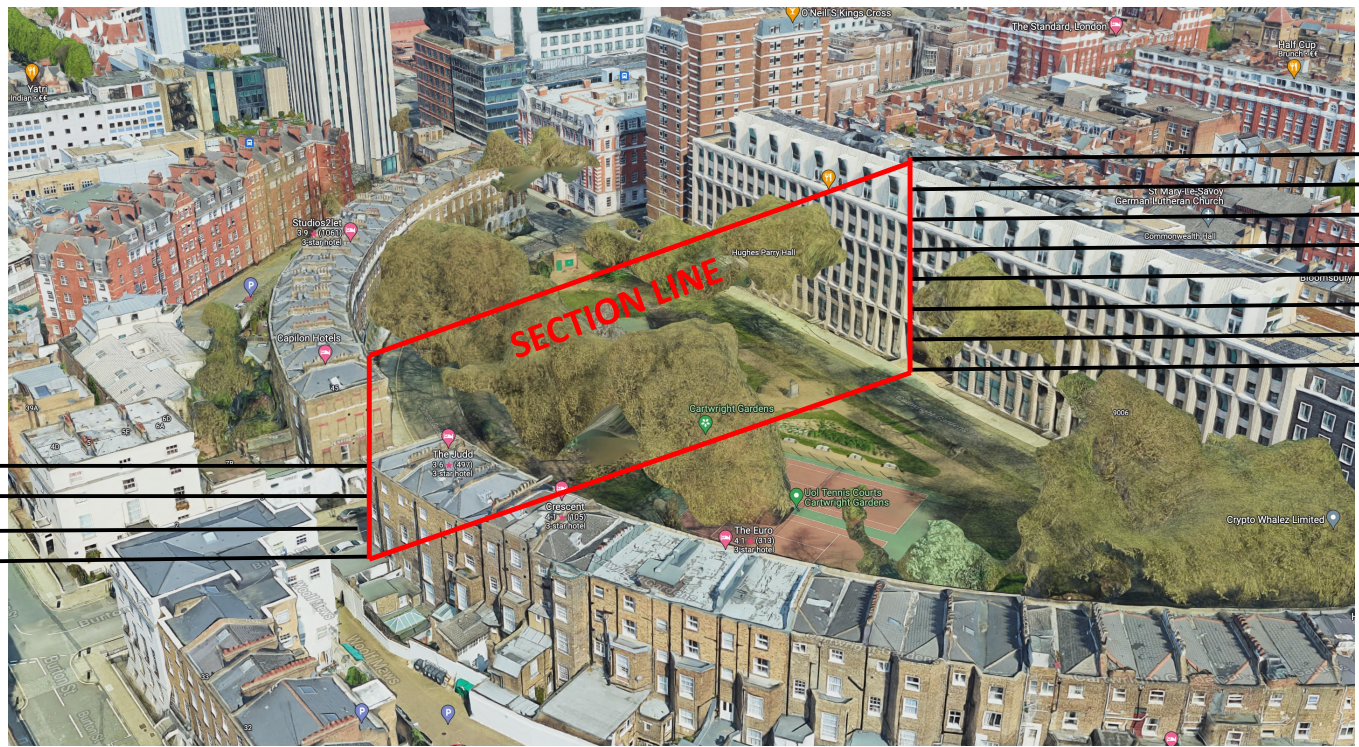


Scale Conversion Calculator

Scale Ratio	1	:	1250
Real Length	3		meters
Scale Length	0.24		cm



However, you don't know how many storeys are the existing buildings you are sectioning. To check this, go to google Maps and count them.



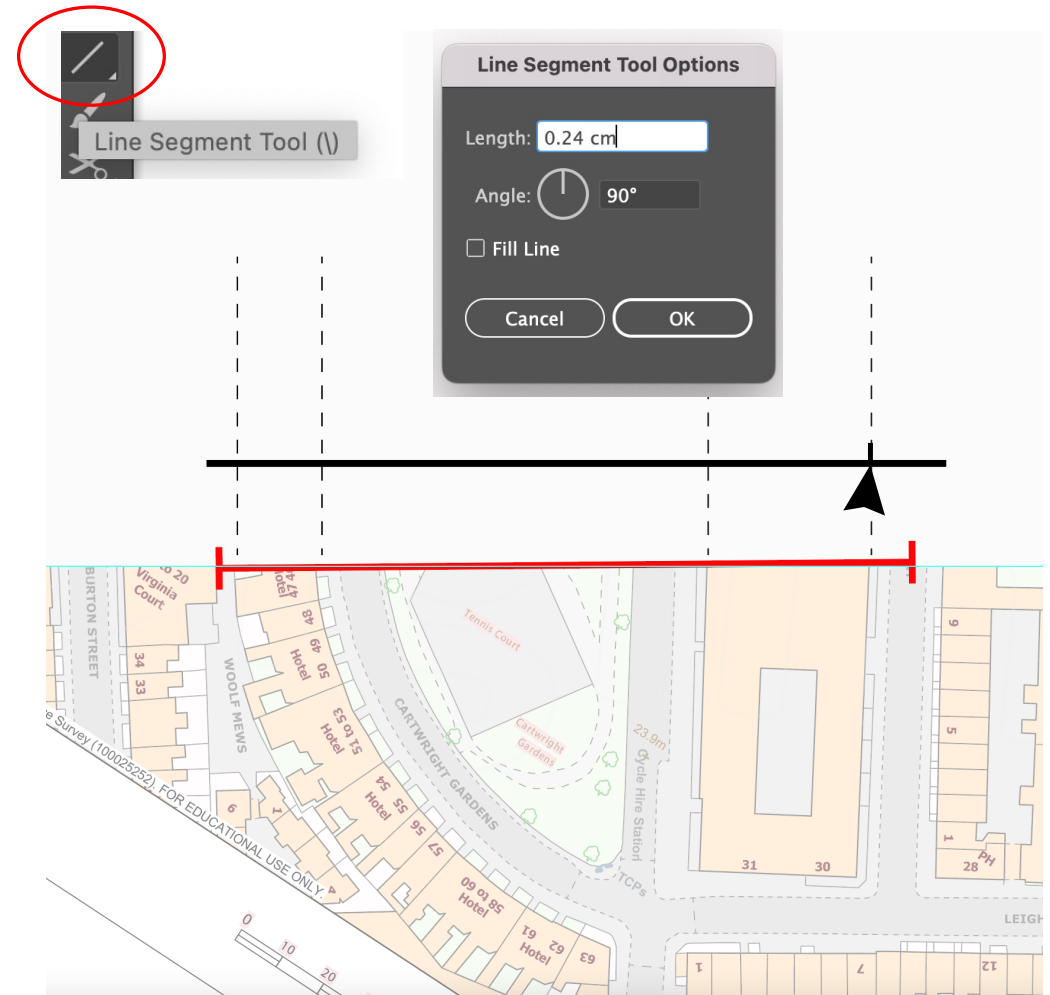
4 storeys

8 storeys



Therefore, you should draw storeys of 0.24cm height.

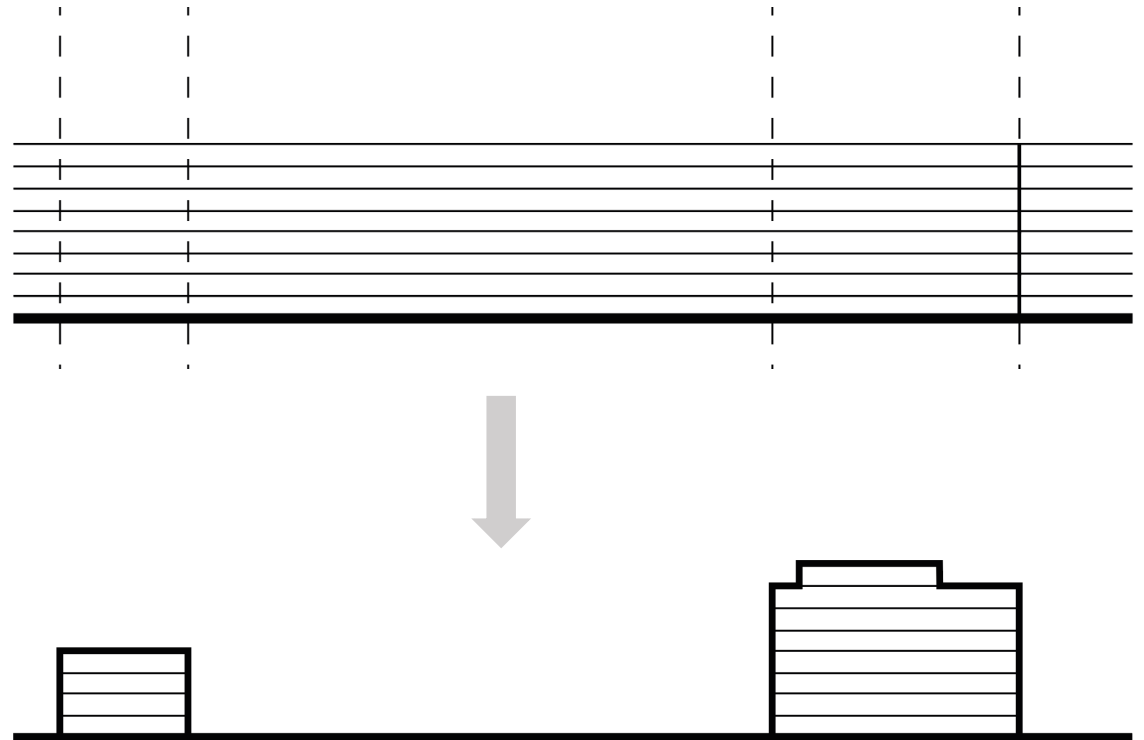
1. In Illustrator, use the **Line Segment Tool** and just click once on the GROUND > a window will appear > set 0.24 cm of length & 90° vertical > OK
2. The short line that will appear is the height of each storey. Repeat this process as many times as the layers of the buildings.





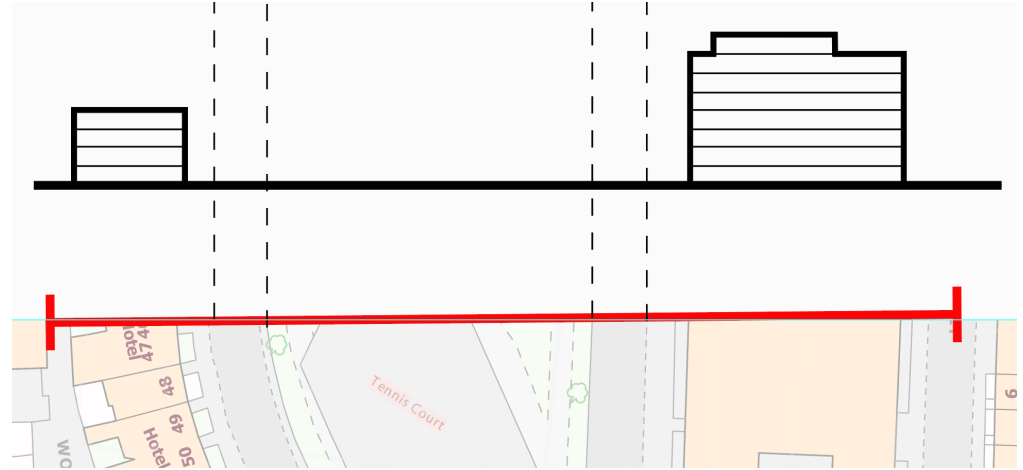
1. Copy and paste until reach 8 lines
2. Use the **Line tool** to trace over the building's footprint (remember, 4 storeys on the left building and 8 storeys on the right one).
3. Adjust lines' thickness and erase the guidelines.

NB. Check on Google Map how is the shape of the roof.





Do the same process for drawing the green spaces, pavements and streets.



Add **trees** (download from <https://meye.dk/>) and **cars/people** (<https://thenounproject.com/icons/>)





THE BARTLETT