5

MANCHESTER | URBAN DESIGN | LAB

MUD-Lab Toolkit

Adobe Ai 3: Advanced Techniques

Adobe Ai is the software we will be using to create our analytical maps. You have been introduced to the software basics in Adobe Ai 1 ans 2 hand-books. In this handbook you will learn some more advanced techniques including Image Trace and the Mesh Tool.

MANCHESTER 1824
The University of Manchester

Toolkit Published 2020

The MUD-Lab Toolkit

Series Editor: Dr Philip Black

Series Graphics/Software Editor: Dr Taki Eddin Sonbli

Regular Series Contributor: Mr Robert Phillips

MANCHESTER | URBAN DESIGN | LAB

To reference this MUD-Lab Toolkit please use the following:
'Manchester Urban Design LAB (2020) '***MUD-Lab Toolkit: Adobe Ai Advanced Techniques***'
accessible at www.seed.manchester.ac.uk/mudlab

Disclaimer: This handbook does not replace the practical session

A Introduction

In this handout you will learn how to add variables to your analytical map. There are two ways to add variables and features to your work:

1- Drawing them: Such as drawing buildings and analytical symbols (arrows, barriers...etc.).
2-Importing them: In this method you import already created objects such as trees, cars, and other street furniture.

Drawing variables has already been explained in detail in Photoshop, CAD and Illustrator 1 handbooks. However, this handout will summarise the process in a shape of design process scenario.

We are going to import a Digimap map to AI and guide you to add features to create an informative analytical map.

Make sure that your Digimap file is a VECTOR file, not a solid image. Refer to Digimap handbook if you do not know how to download vector maps.

B Adding variables to the base-map using the drawing tools

In this stage what you already have in your hands is simply the vector base map imported from Digimap. There are many variables that you may need to add to you analytical maps including: Arrows (to indicate movements and connections) Zigzag lines (for barriers), blobs (to highlight areas), star symbol (for land marks), lines for frontages...etc. This section will show you how to add these elements to your base map.

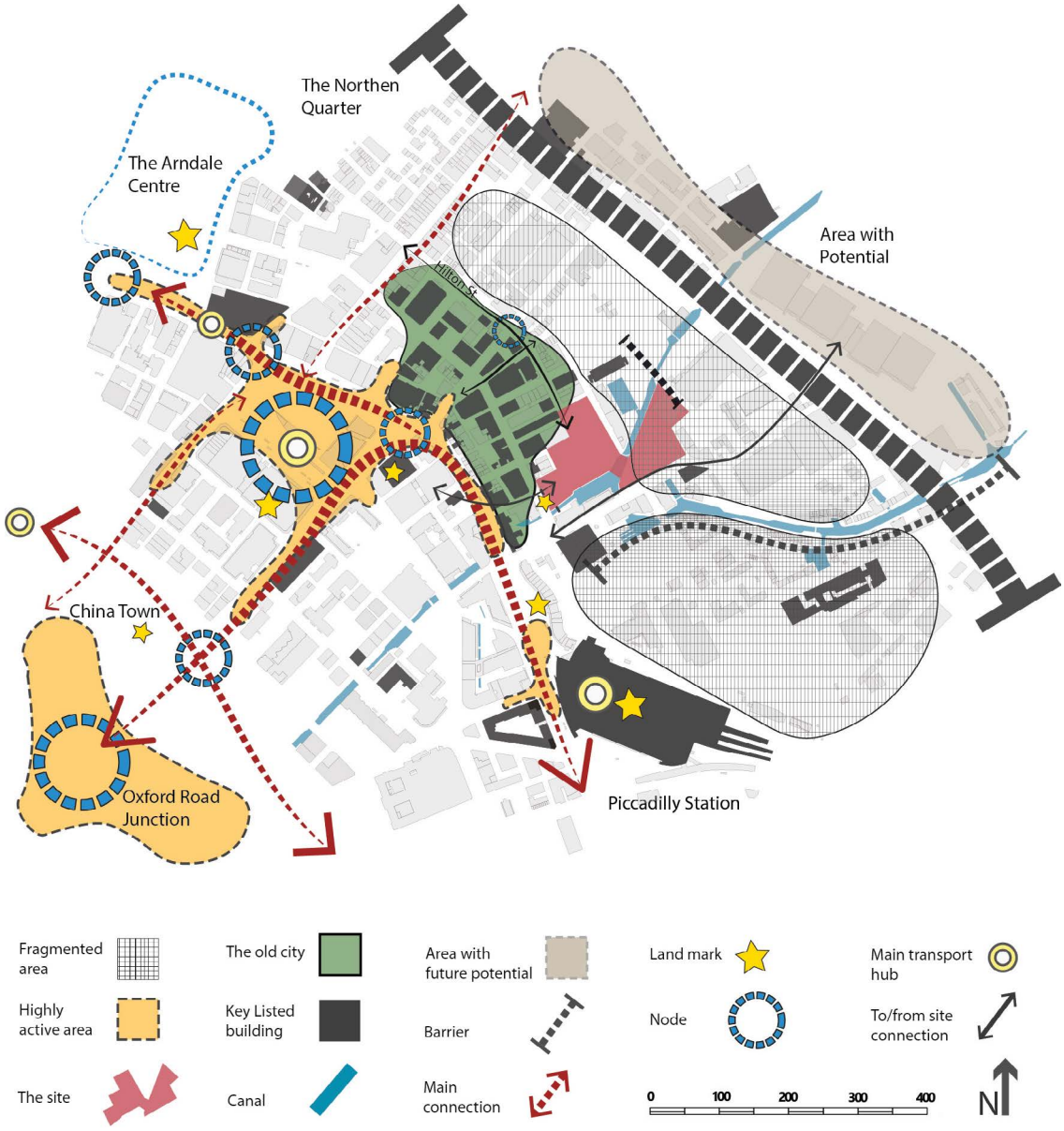
First, we will create a fade base-map to make it less complicated, and then we are going to add the variables on it:

1-Open Adobe Illustrator and open your base-map.
2-Create a new layer and call it ''Fade Base-map''.
3-Turn off and Lock the original base-map.
4- Select the ''Fade Base-map'' layer.
5-Select all the layer elements (Ctrl+a) and change the transparency to 50% (make sure the transparency window is activated, if not: Window/Transparency)
6- **Lock** the Fade Base-map layer so you don't mess with it when adding variables.(always lock the layer that you are not drawing on).

The map is now fade and less complicated.

Have a look at the two maps below and see how the fade base-map gives a stronger message.

Let us create a contextual appraisal map using the drawing tools in Ai. The contextual appraisal map is a good example that includes many elements ranging from blobs and arrows to lines and shapes. The contextual appraisal map is a general summary of the urban context of the area you are studying. It describes visually the existing condition of the site and the key points that need attention. In this type of maps, you need to show various elements including the main connections, places with strong frontages, well defined spaces, poorly defined areas, key views...etc. You mainly need to add lines, dashed lines, arrows, blobs, circles and stars of different sizes and colours to communicate the message you want

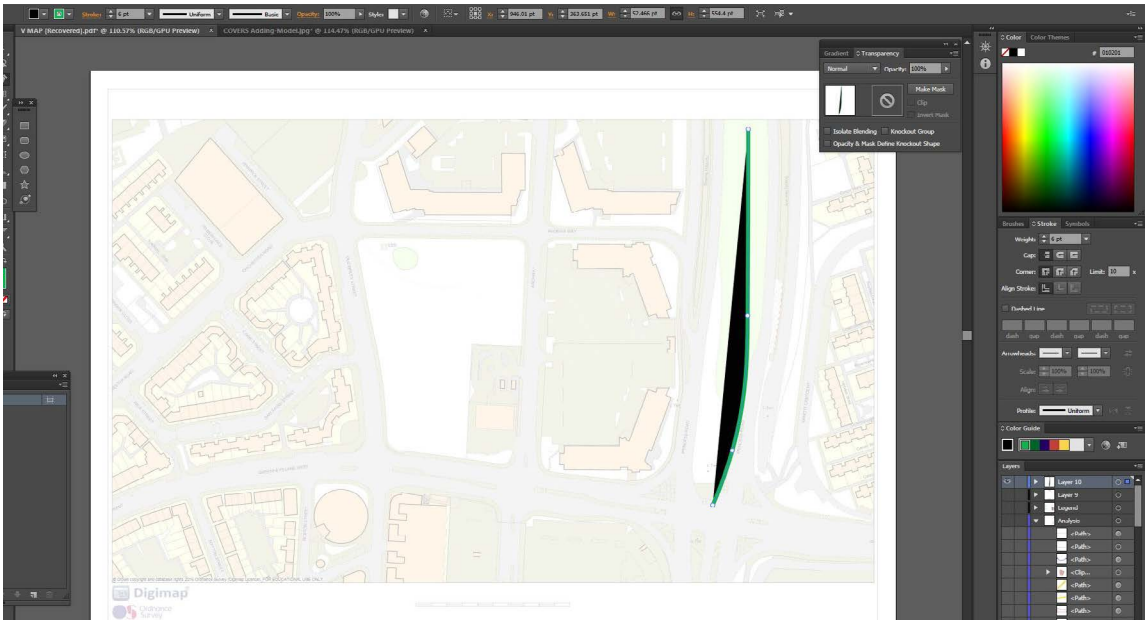


Source: (The Urban Design Process, Black & Sonbli (2019)

We are still working on the file you created at the previous stage.

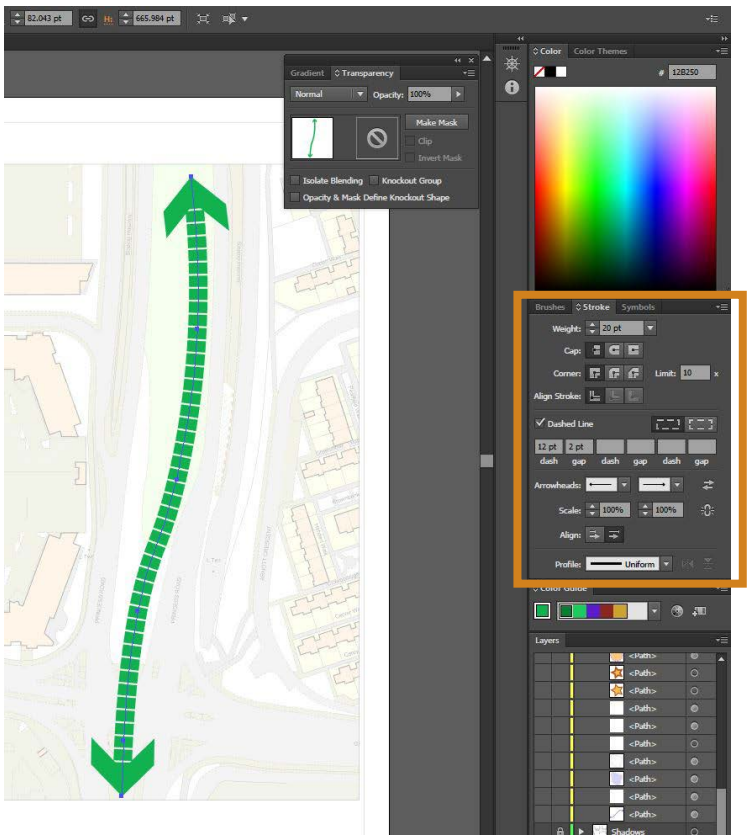
1-Creat a new layer and call it Analysis.
2- Select the Analysis layer.
3-Select the Curvature Pen Tool 
4-Draw a line on a main street.

You will end up with this odd shape as below. The black fill is what makes this an area rather than a line.

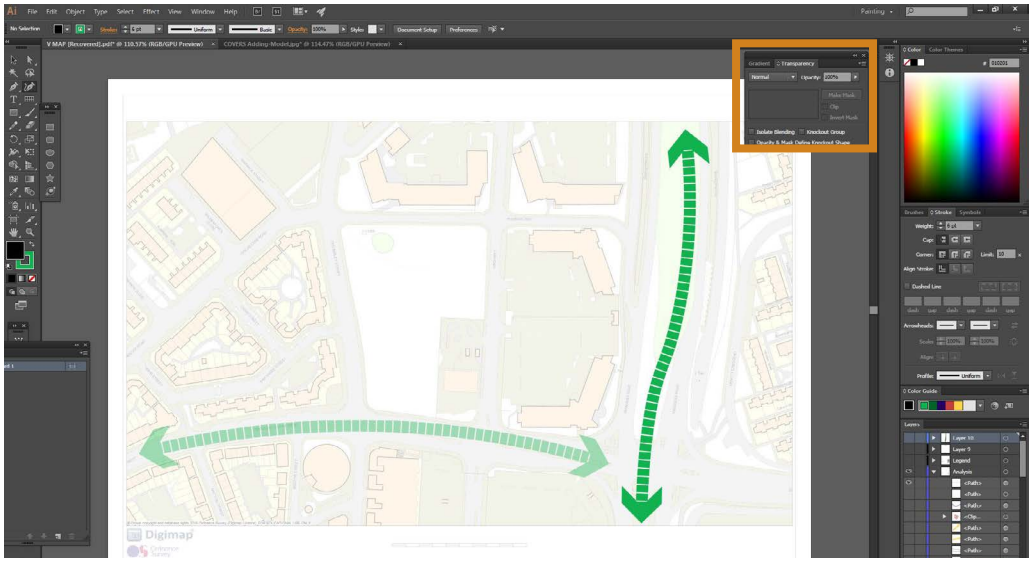


5- Change the Fill and Stroke of the object as below: No Fill, green Stroke (make sure the object is selected with the Group Selection tool first).

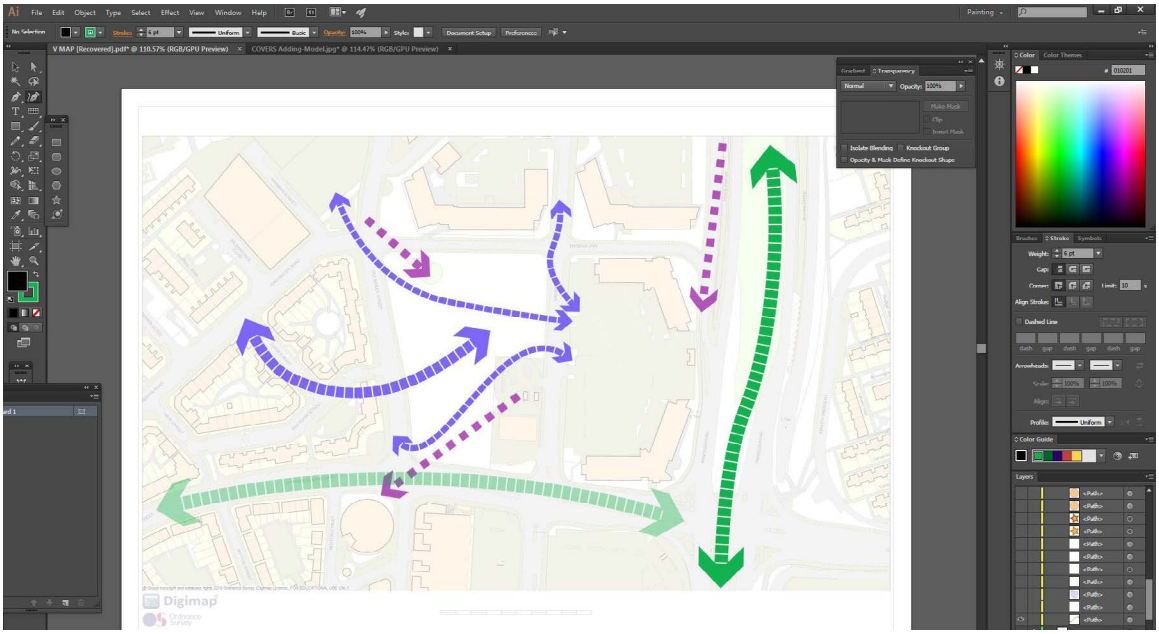
6- Change the stroke properties as below. Make sure you tick the ''Dashed line'' option. Add two ends to the strokes to create the arrow.



This is the main method of creating and adding variables in AI. Create the shape and alter the Fill/Stroke and the Stroke options. Sometimes you may need to create transparent elements. Using the same technique, create a new arrow on another street. This time make it transparent. Select the arrow and change the transparency



Using the same method, I created many arrows that indicate the main connections, the key views and the potential connections. Some arrows have one tip, others have two. Different sizes indicate different hierarchies of objects. This is an essential part of your message.

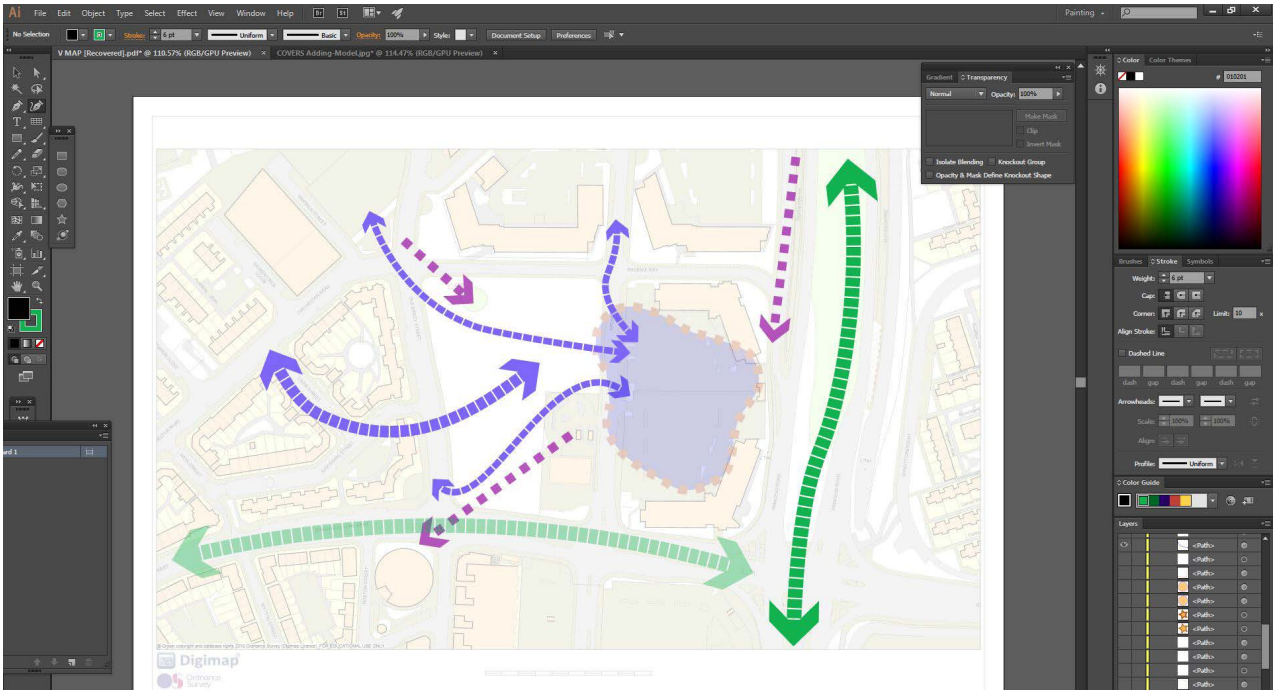


Note:
Rather than drawing new arrows every time, you can Copy them (Select with the Selection Tool and then drag and hold Alt) and then manipulate them (you need to select the object with the Direct Selection Tool and select the arrow tip to change the arrow direction). You can also create a new line and match it with another dashed line using the Eyedropper Tool :

Select the line, select the Eyedropper and click on the line you want to match.

Let us now create a blob to highlight an area:

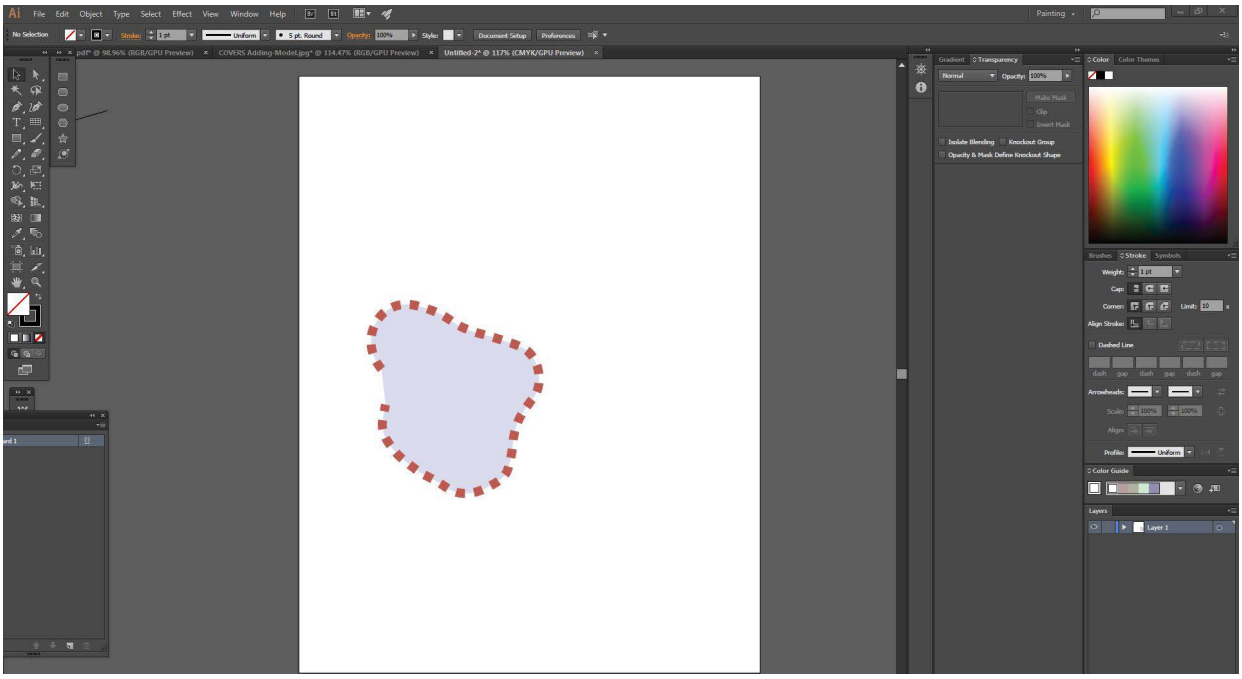
1- Make sure you are on the Analysis layer.
2-Select the Curvature Pen Tool and draw a random shape around the site. This time we will give it a blue Fill and a red Stroke. Give the stroke a dashed patter. Select the object and change its transparency.



3-Draw some other blobs to highlight all the areas of opportunities on your map.
Note: There is a simple method to make the patch transparent with a bold Stroke:
-Create a new layer.
-Select the patch and copy it to the new layer (Ctrl+c/ select the new layer/ Ctrl+F to past it on its correct location).
-Increase the transparency of the new patch to 90%. Choose No Fill

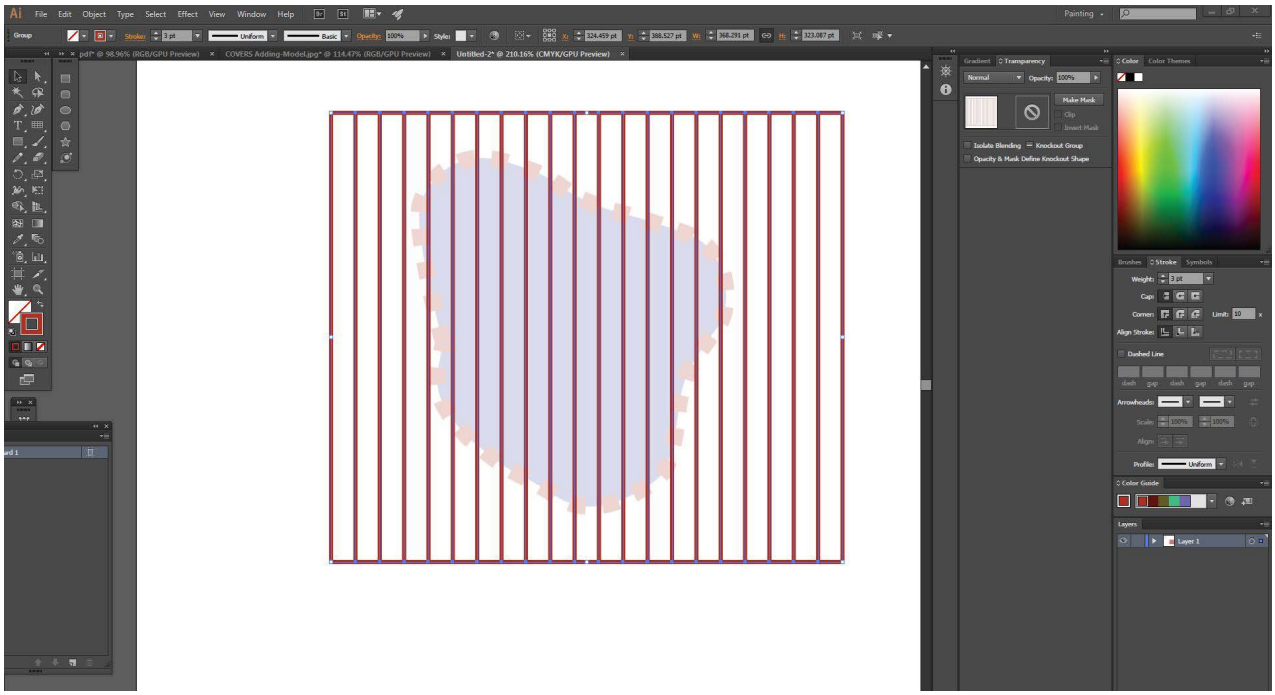
Creating a hatched fill:

If you wish to create a hatched fill, follow the steps below:
1-Creat a new AI file.
2-Copy the patch you want to be hatched and paste it in the new file.

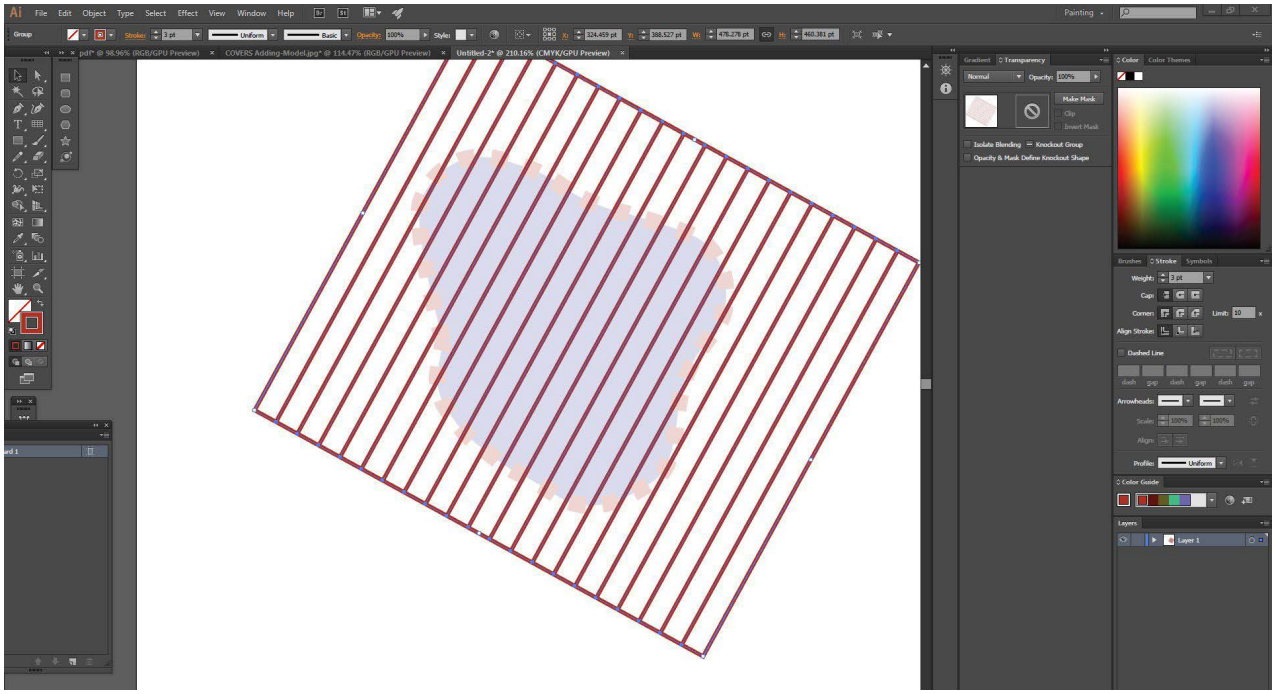


3- Select the patch/ right click/Arrange/Bring to front.
4- Click on the Line Segment tool to reveal the Rectangular Grid Tool  . Select it.

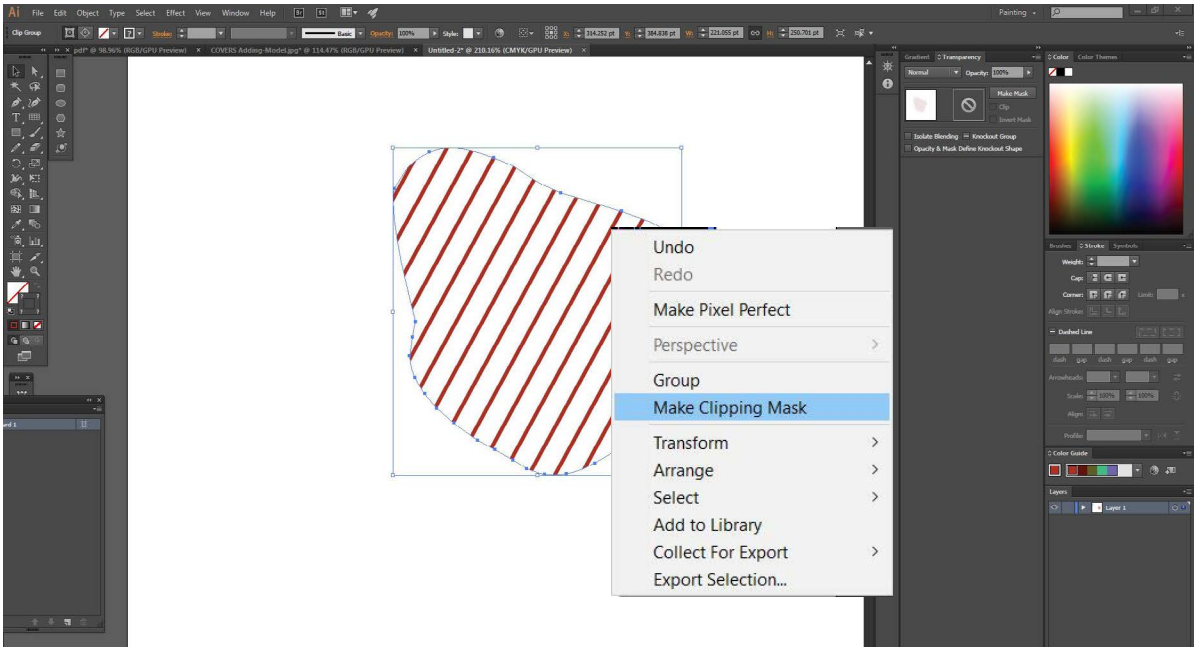
5- Draw a rectangle over the blob. (If you click on the screen, the hatch options will appear so you can modify the hatch scale...etc.). From the layers panel, drag the grid abd put it BELOW the blob.



6- Select the Rectangle with the Selection tool (not the Direct Selection tool) and rotate it.



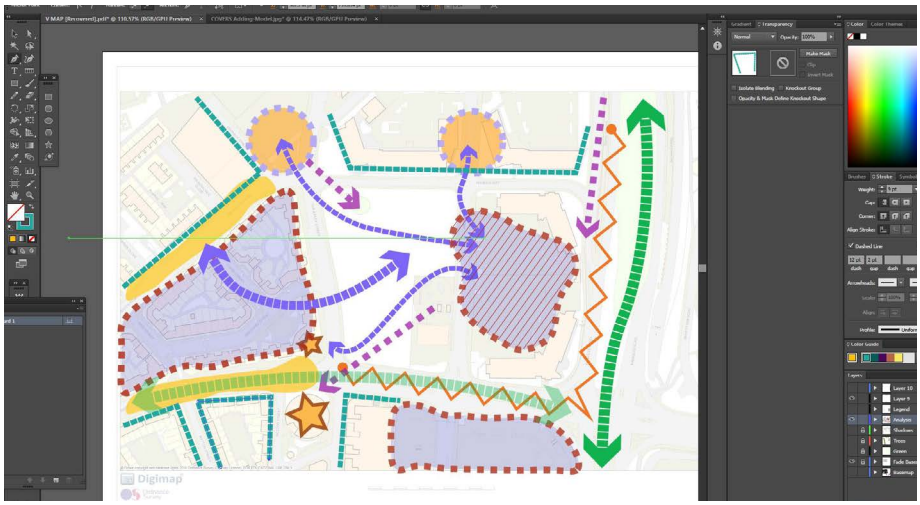
7-Select both objects (the rectangle and the patch) with the selection too. Right click/ Make clipping Mask



9- Copy the shape to your Basemap file (Ctrl+c then Ctrl+v)

Using the same methods of drawing addressed in this section, create transparent bobs with no Stroke to highlight the busy corridors on your studies area. Give the object a yellow fill, no stroke and make it 60% transparent.

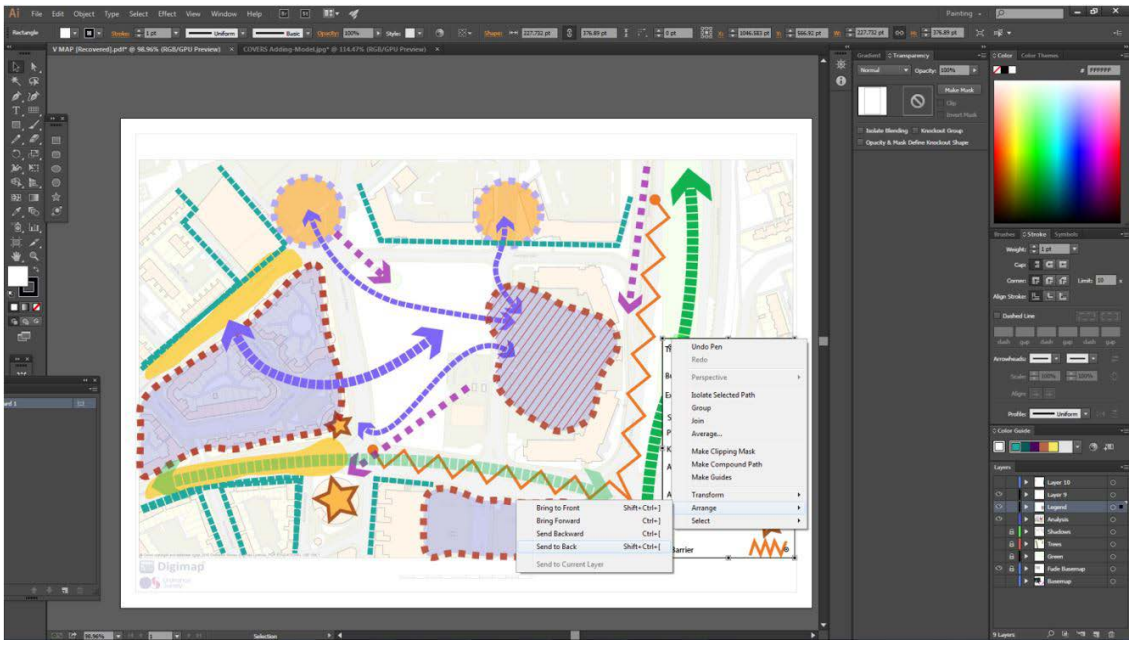
Add as many variables as you need to make your make informative. However, make sure that the map stays readable!
Your map now should look like this:



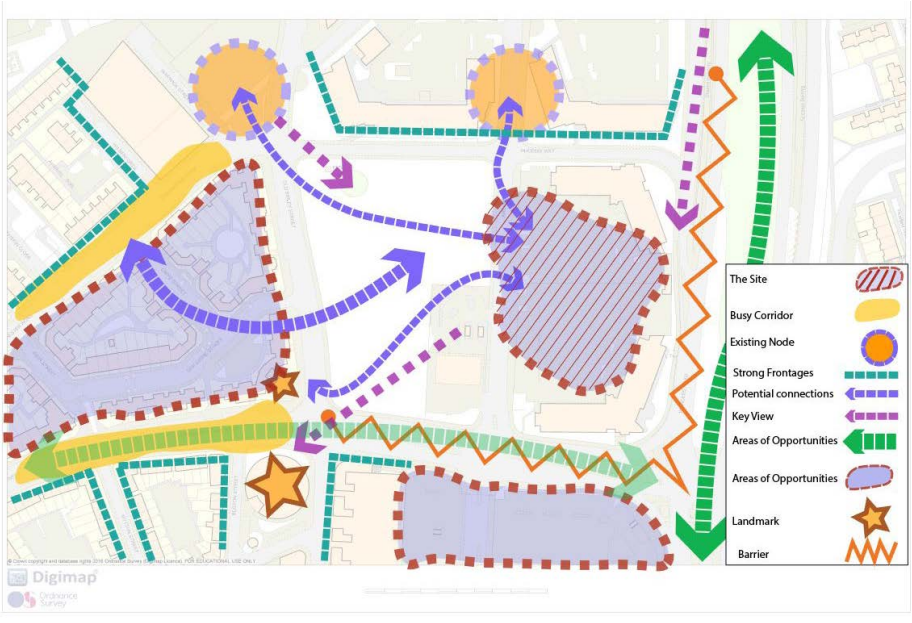
The map still misses some essential elements: The legend and the north arrow. Refer to Graphical Language handout to learn how to add them in details. To create a legend, follow the steps below:

1-Create a new layer and name it as ''Legend''.
2-Select the ''Legend'' layer.
3-Draw a rectangle with a white Fill and a black Stroke.

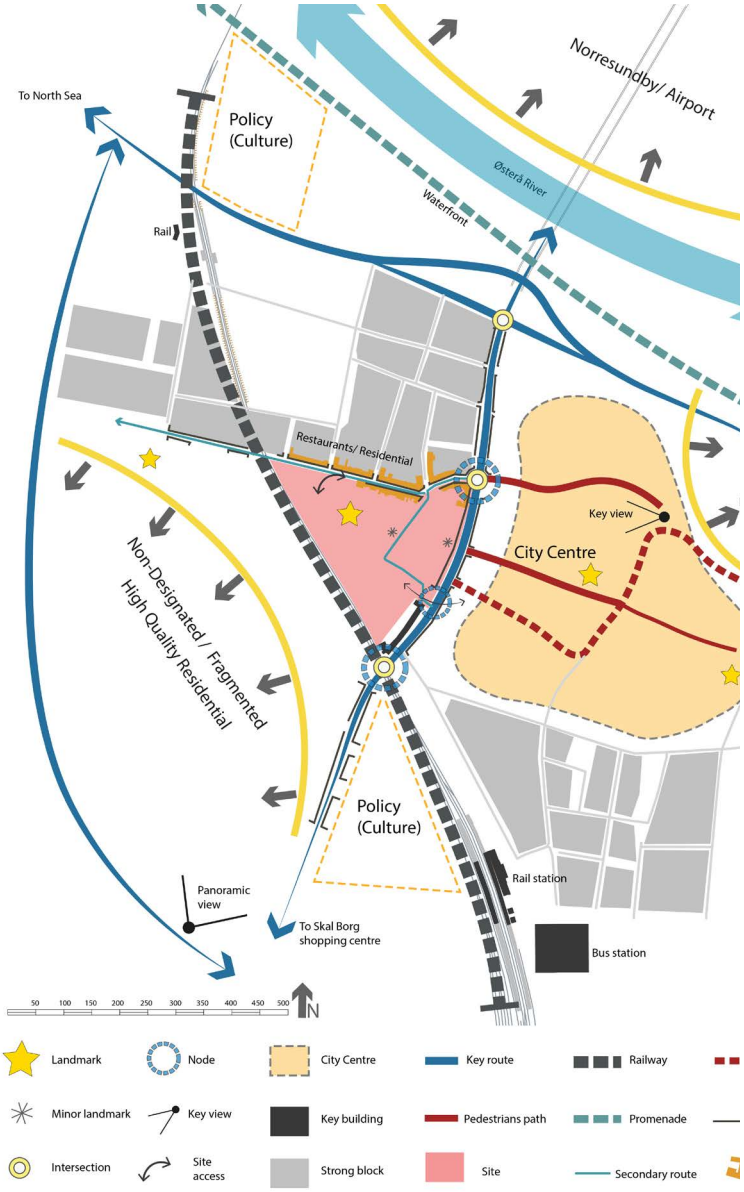
4-Select the rectangle/ Right click on the rectangle/ Arrange/Send to Back. This is a method used to arrange objects on the same layer. In this way you can make sure that the rectangle object will act as a background to the legend.



5- Draw the shapes and lines you used inside the rectangle, use the Eyedropper tool to match properties, and use the Type Tool to add annotations. You should end up with this:



The map can be improved graphically by paying more attention to details, scale, shapes and colours. The Advanced Graphics workshop should give the tips to take your graphics to a different level, to create a more professional map such as the map below:



Source: Applied Urban Design (Black, Martin, Sonbli, Phillips, forthcoming 2021)

However, the skeleton of the map above and all its contents are done using the same tools explained in this hand-out.

C Importing Graphics to your file

The seconf way of adding elemets to your map is by importing them to your graphic. In some cases you may want to add symbols or PNGs to your map. This can be done simply by:

1- Locating the element you want to use: this should be a PNG file or a vector file so yo can edit it in Ai. You can use websites such as Vecteezy to download vectors and importing them.

2- Either drag the file into your map space or open it seperatly and copy and past it to your file.

The Ai file below is a vector file I downloaded from Vecteezy. As those trees are vectors, they can be modified in Ai, so their shapes and colores can be changes. If you ant to add a tree to you map for example, simply select it with the Group election tool, copy it (Ctrl+c) and paste it to your file. You can download traffic symbols and some useful signs that can be used in your analytical maps using the same technique.