THE BARTLETT SCHOOL OF PLANNING
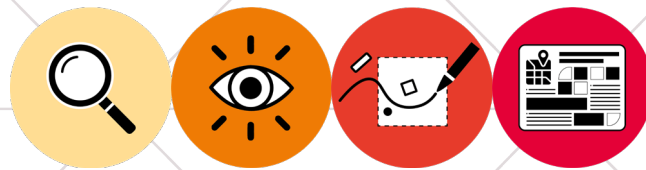
UCL

Graphic Skills Lab

Handout series

Adobe Illustrator

Ai

URBAN
GRAPHICS
SKILLS

Graphic Skills Lab
The Bartlett School of Planning, UCL

Coordinators

Valentina Giordano

Dimitrios Panayotopoulos-Tsiros

Development assistant

Irene Manzini Ceinar

Advisors

Dr Juliana Martins, Director of Education, Bartlett School of Planning

Dr Jess Ferm, Director for Undergraduate Programmes

Dr Ben Clifford, Director for Postgraduate Programmes

Dr Pablo Sendra, Programme Director for MSc Urban Design and City Planning

Dr Michael Short, Programme Director for MPlan City Planning

Prof Matthew Carmona, Professor of Planning and Urban Design

BUPS – Bartlett Urban Planning Society (Established in 2012, the Bartlett Urban Planning Society (BUPS) is a student-run organisation, subsumed under the Bartlett School of Planning (BSP). BUPS represents, reinforces and protects the interests of planning students while inspiring the community-at-large of our role in the Built Environment.)

CONTENTS

1. Introduction

Adobe Illustrator is a vector graphics editor and design programme used in urban design and planning for (i) creating vector graphics, such as base maps, site analysis, diagrammatic maps, and any line work; (ii) Intermediate steps between GIS / ScketchUp / AutoCAD and a final report.

The key skills of Adobe Illustrator (AI) are:

- Importing into AI from other programmes
- Working with layers
- Drawing lines and shapes
- Aligning layers / pasting in place
- Embedding and updating links to other Illustrator files
- Swatches and colours
- Selecting layers by appearance (useful for quickly separating an imported map into different layers)
- Pathfinder tool

2. Opening a file

1. To open a file with Illustrator, you can or drag and drop the file on the illustrator (AI) icon, or right click on the file and open in AI.

2. Very often a PDF image (or any kind of vector-based image) is composed by different layers and/or overlapped images. If you want to modify/erase/separate one of those layers, firstly **you should unlock it by releasing any clipping mask** (see image below). This is because the Digimap is automatically grouped in layers. The direct select tool opens up the layers so that you can select an individual object that is grouped. To do this:

   - Once you open a PDF image (or any kind of vector-based image) in Illustrator, you should left-click on the element you want to release (it seems that nothing is selected by this point), such as a text or a line, then right-click on it and press '*releasing clipping mas*k'.
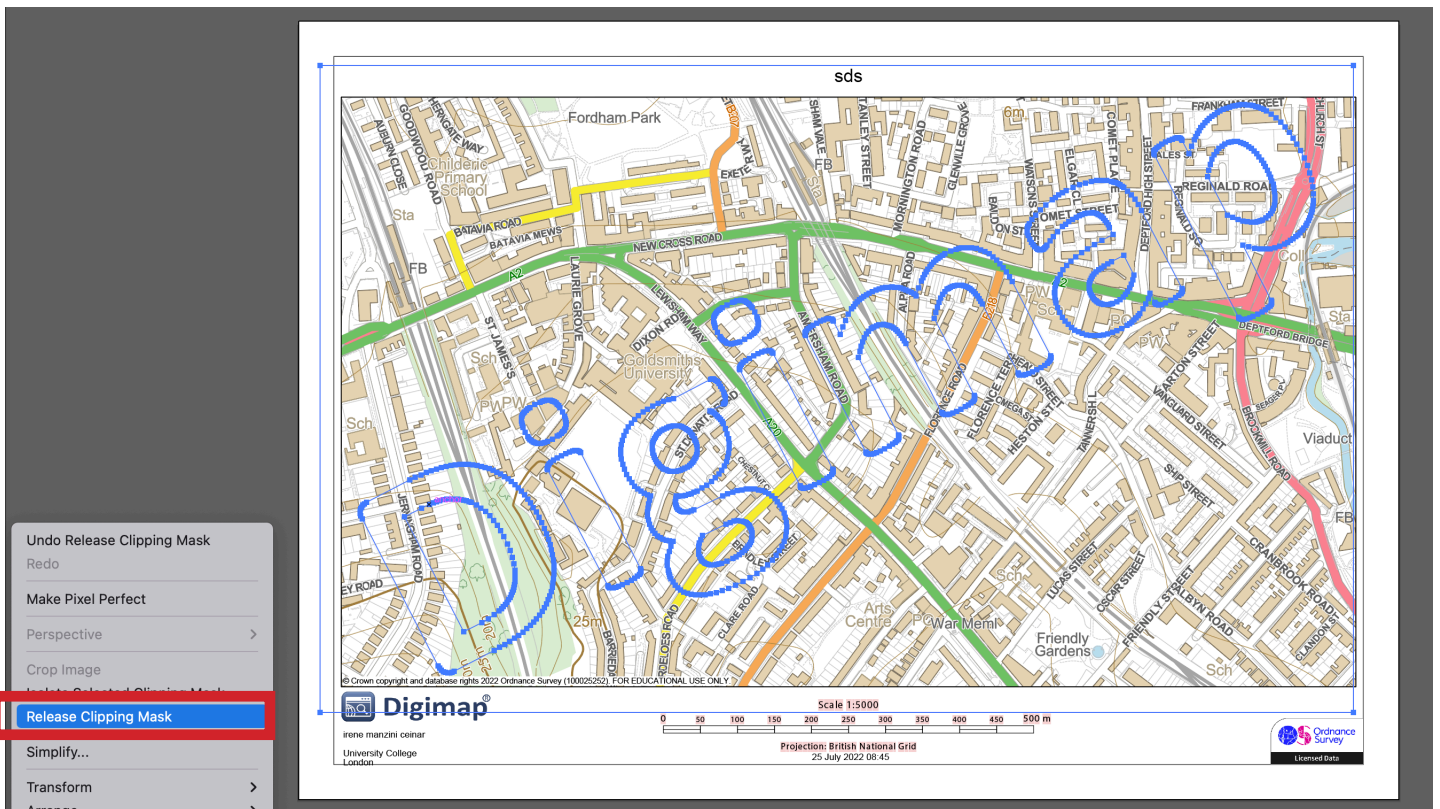
3. Separating layers

- Once you release the first clipping mask (right-click), then you should deselect (or click on the grey background). When everything is deselected, then you should select with the cursor something on the map that has not been released. Once it is selected, then you right-click on it and again 'release clipping mask'.

- If everything is released, by right-clicking you will not find anymore the tool 'release clipping mask'.

- PS. you can do this only i) before modifying the image in Psd and ii) if it originally is a PDF image (or any kind of vector-based image).

- PPS. sometimes you need to 'ungroup' the image before starting realising clipping masks. To do this, right-click on the image and press 'ungroup', then click on the grey background and, when everything is deselected, start with the 'release clipping mask' process.

This will assist in workflow and help organise the information.

1. First, open a new layer in the layers tab and rename this to suit what the new layer will be showing.

    - Layers for this map will most likely be: buildings, streets, sidewalks, green, text, scale.

2. To select all of the buildings, select one shape with the direct selection arrow tool (white arrow, hotkey "a"

    - Like before, you will have to click many times in order to select the object that you want.

    - After you have selected the one object, hit ESC once. This will enable you to select all of the objects in the layer the object is a part of.

3. To select all of the buildings, go to Select > Similar > Copy (Command "c").

4. Lock the layer that the buildings came from in the Layers panel. Toggle lock button.

5. Click on the new layer that is labelled "buildings," Next select Edit > Paste in Place (hotkey command F) to paste the selected existing objects into the new layer in the same location.

6. Repeat for following layers.
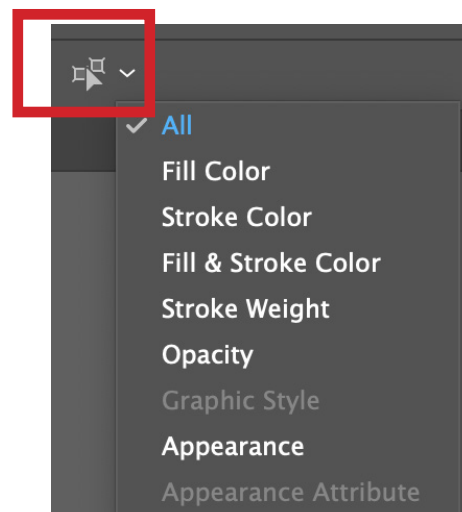
4. Creating a scale

It is important to ensure that you work remains scaled throughout the editing process. Your Digimap file will come scaled. You can use the following steps to transfer this scale to your new map.

1. Turn on the layer that the Digimap is on.

2. Create a new layer that says "Scale."

3. On that new layer, trace over the scale at the bottom using the pen tool (shortcut "p").

4. Add text for the numbers.

5. Lock the layer that your scale is on by clicking the lock symbol next to the layer name in the layers panel. *Anytime you rescale the map that you are working, ensure that the scale gets rescaled with it!*
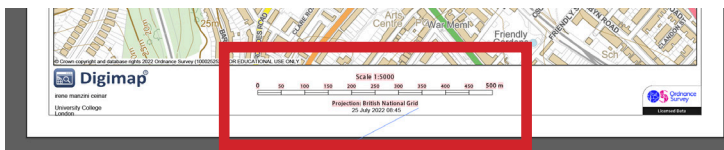
5. Changing an object's attributes

It is important to know how to change an object's attribute in order to change the appearance and style of your graphic. You can use the following steps to do it:

1. Select the object(s) with Selection tool (black arrow, hotkey "v")

   • To select all of the objects on a layer, go to the layers panel, and click on the circle that is to the far right of the layer name

2. You can change the colour of the outline and the fill of an object. On the bottom left hand side of the workspace, select which

one you would like to change. Double click on that color to change, or go to the top right hand area and select "color."

   • You can also copy an existing colour by selecting the eyedropper tool (hotkey "i")

3. To change the lineweight of an object, click the Stroke panel on the right side of the workspace. The "weight" will determine how thick the line is. The "type" will determine if it is a flat line, dashed, etc.

   • If you want a dashed line, select "dashed." You can then change the metering of the line at the bottom where it says "dash, gap"

6. Locking layers

To avoid editing layers that you want to remain untouched lock layers by selecting the layers tab > toggle lock.
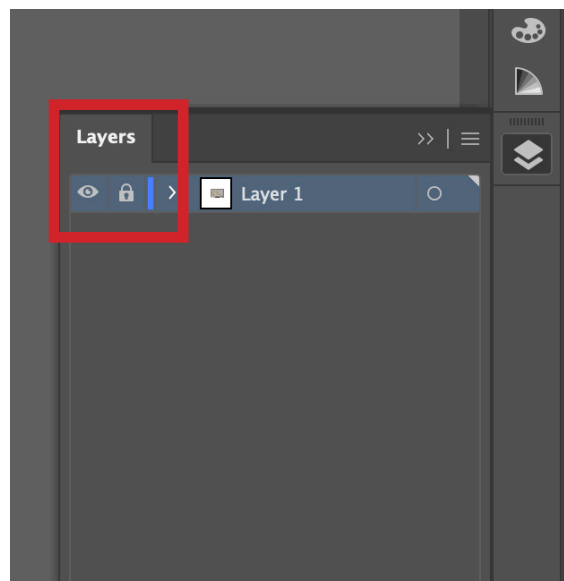
7. Drawing shapes using the pen tool

1. Select the Pen tool (hotkey "p") to draw a shape.

    *   If the shape comes to a close (such as a rectangle or polygon), make sure that on the last click, the arrow has a small circle (°) at the tip of your curser. This will ensure that the shape is closed.

2. Select line width in the Stoke Tab to adjust the style you prefer.
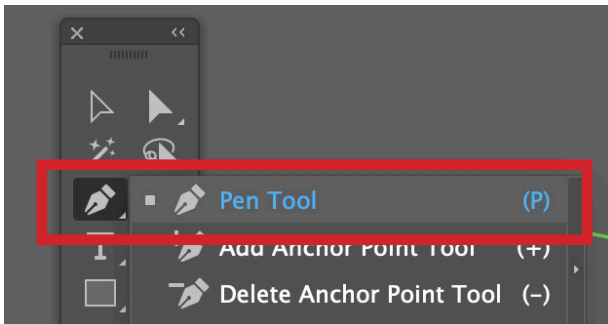
8. Round corners

There are several ways to make the corners of an object round. This is just one simple way.

1. Select > Effects (on the top tool bar) > Stylise > Round corners

2. Alter the radius as needed – If you find that you later want to eliminate or alter the round corners, find the "graphic styles" tab on the right. Select "attributes" at the top. Either double click on "round corners" or select and then delete the attribute.
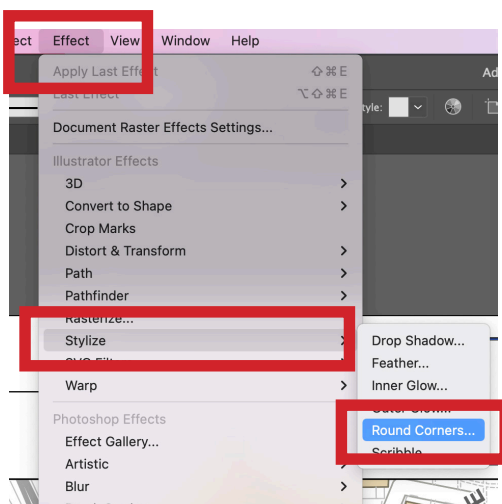
9. Exporting your file

You can export your file in different ways:

1. JPG or a PNG filetypes

You can export your file to either JPG or a PNG filetypes for editing in Adobe Photoshop. PNG's usually have smaller file sizes and allow for the backgrounds to remain transparent (instead of JPG which automatically fills it with white).

You can do it by: **File > Export > Export as > Format (select PNG or JPG).**

2. PDF filetypes

Otherwise, you can export as a PDF file to preserve layers and editable options.

You can do it by: **File > Save as > Format (select Adobe PDF)**