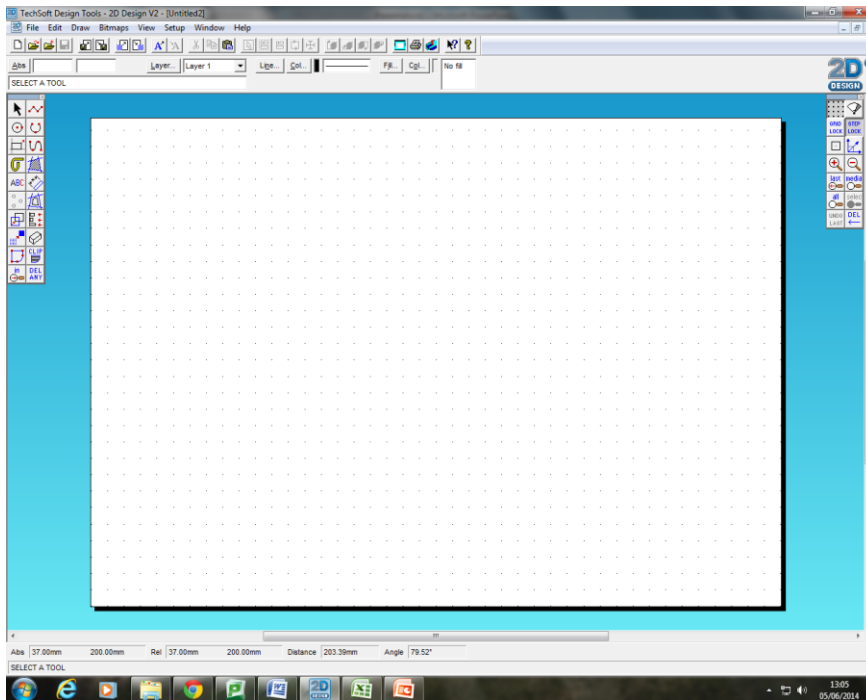




# **2D Design exercise**

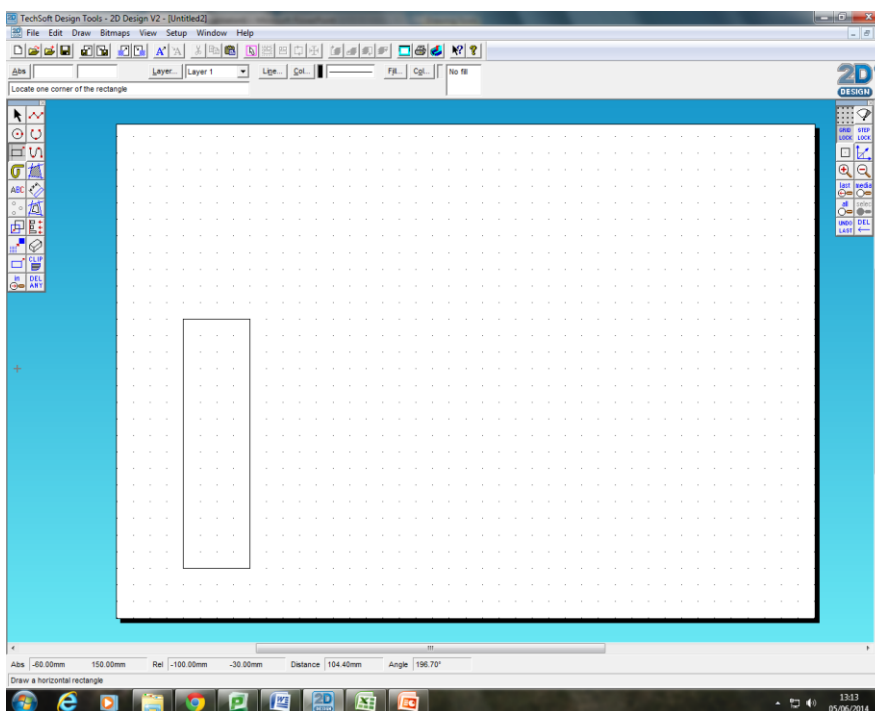
## **Bookmark**

## Instructions for the bookmark designs in 2D Design

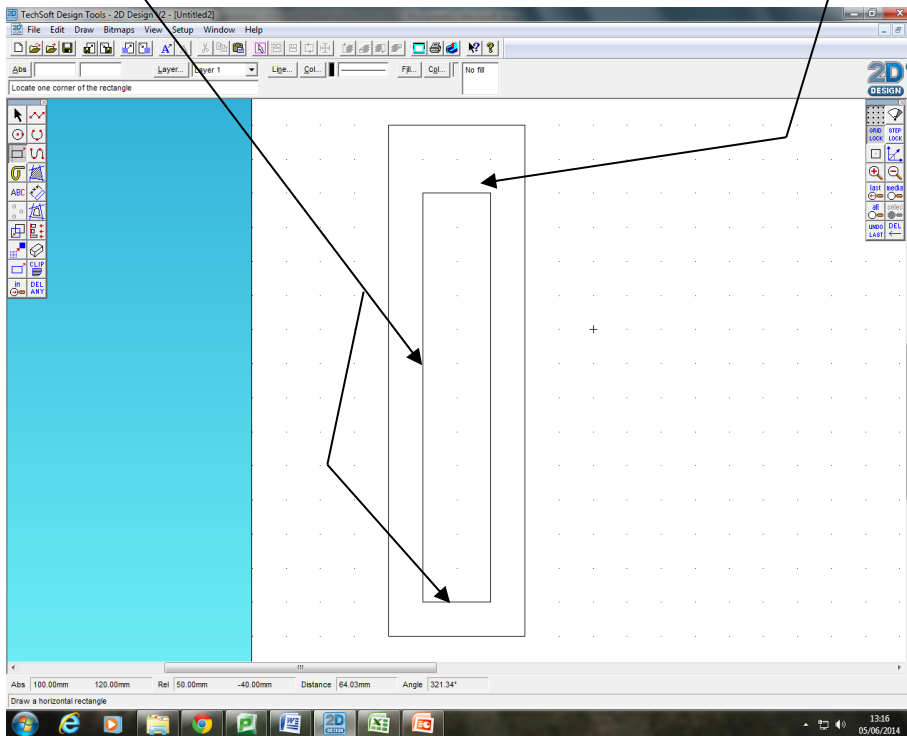
- Open 2D Design.




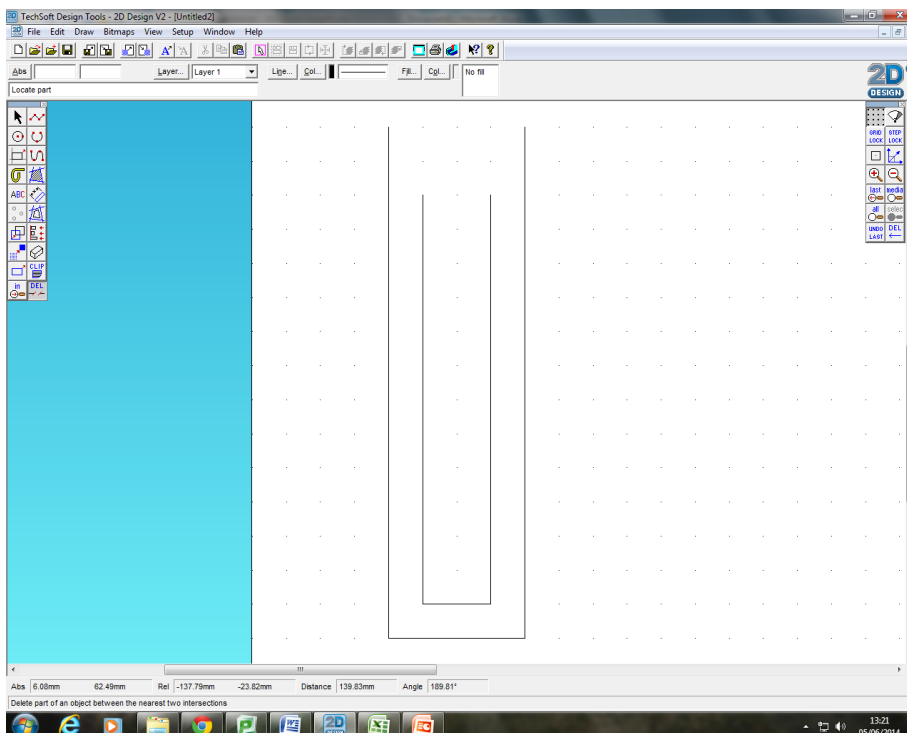
- Select the Grid Lock tool  from the right hand tool menu.
- Select the Shapes tool  from the left hand tool menu.
- Draw a rectangle 150 x 40mm.




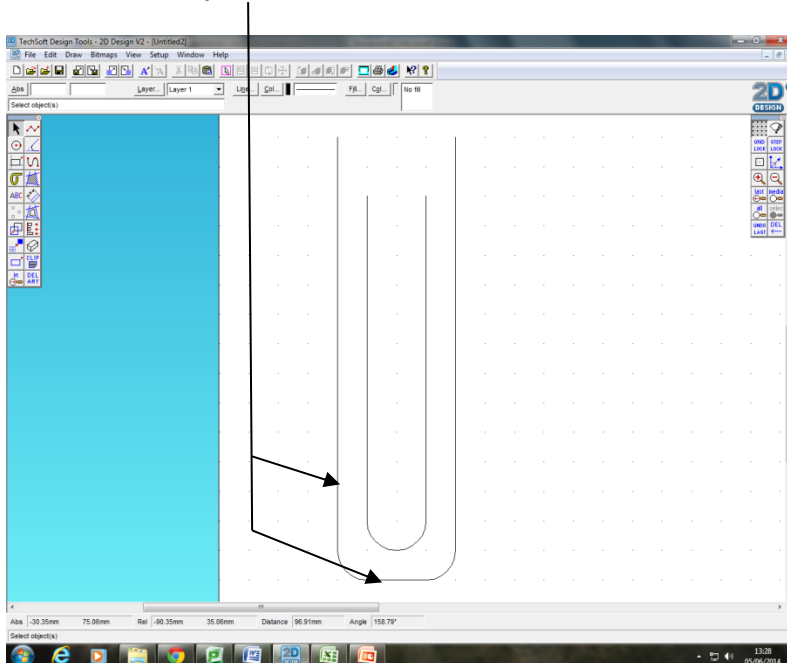
- Draw another rectangle inside the first rectangle which is 20mm away from the top and 10mm away from the sides and bottom of the first rectangle.






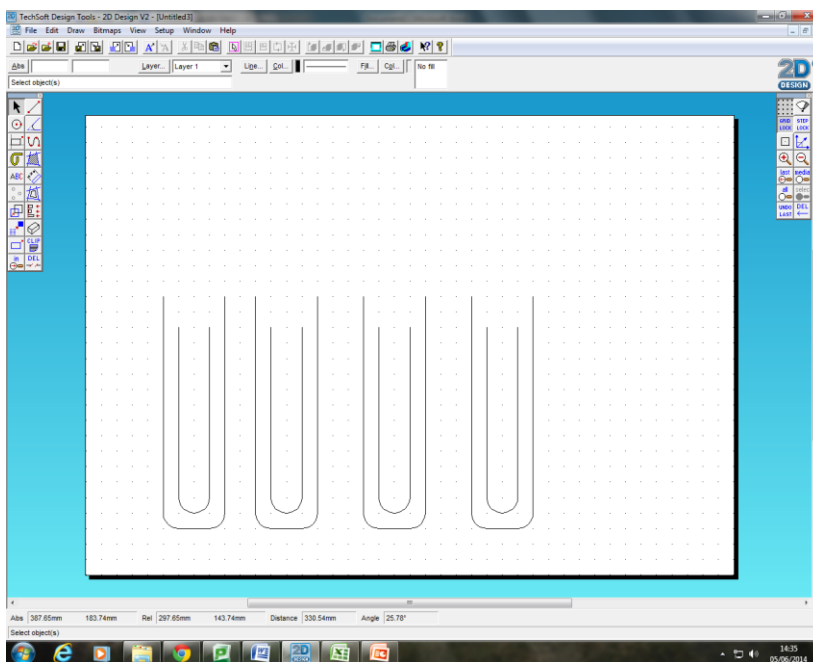
- Select the Delete Part of an Object tool  . Access this through the Delete menu.
- Delete the top of both rectangles.



- Select the Filleted Arc tool . Access this through the Arcs menu.
- Accept the 10mm default radius, click OK.
- Select adjacent lines to create a fillet between them.

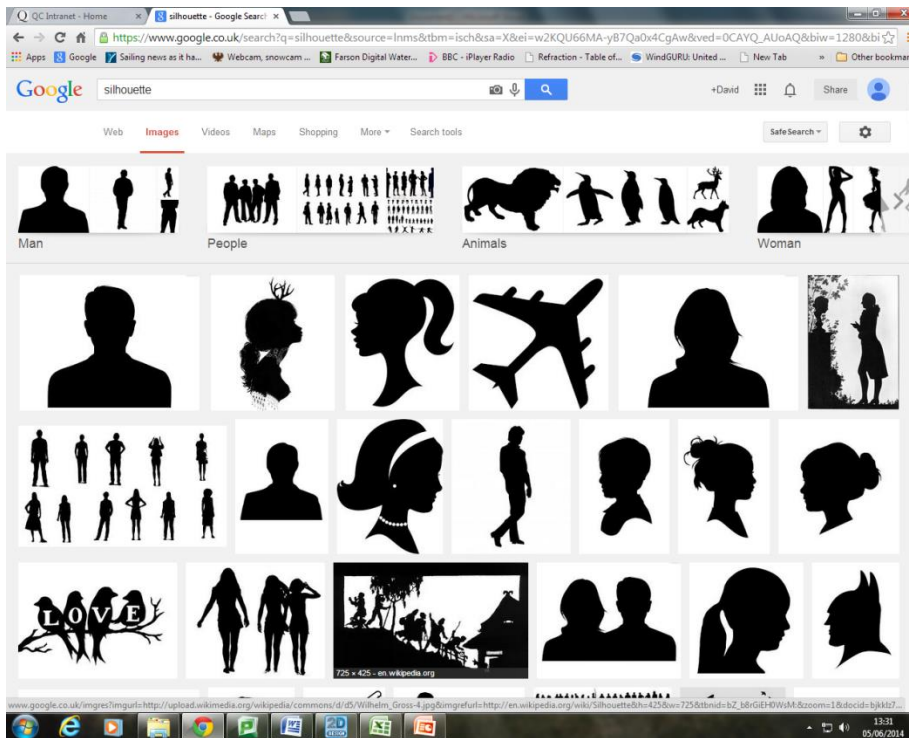


- Select the Select All tool . This tool is near the top, half way to the left hand side.
- Select the Group tool . This tool is next to the Select All tool.
- Select the copy tool  at the bottom of your drawing.
- Move the new drawing to the right and level with the other drawing.
- Repeat the above two more times and you should have a drawing which looks like this: -

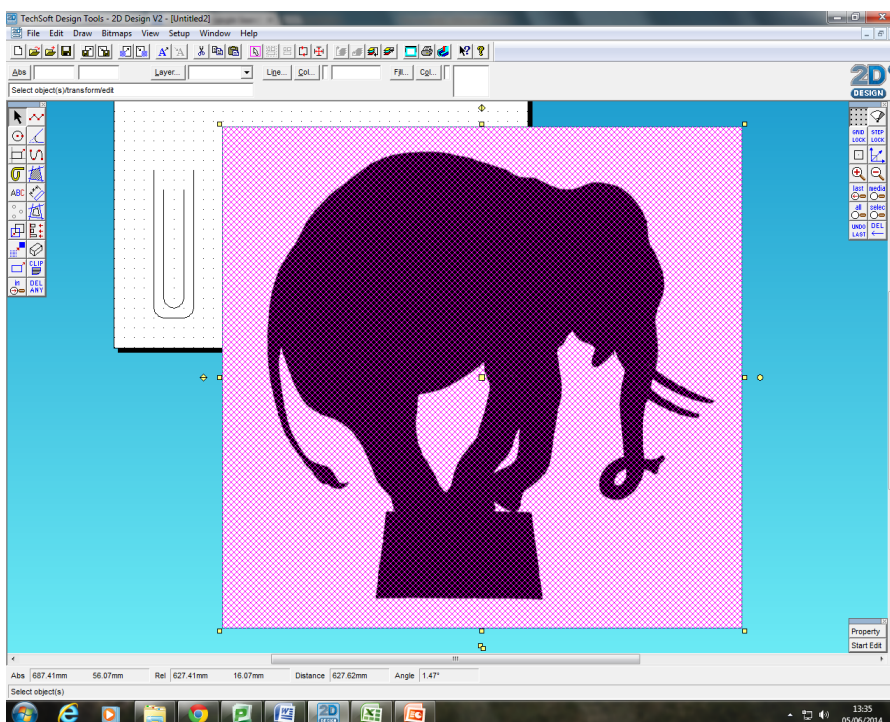


For clarity I will show the rest of the screen shots with only one drawing on it.

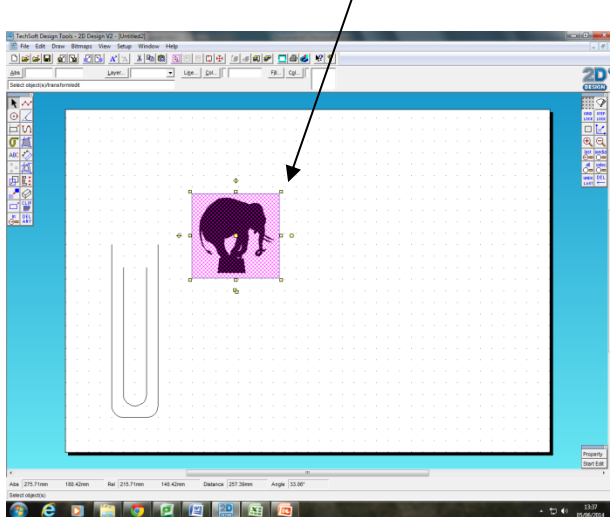
- Open a search engine on the internet and search for Silhouette images.



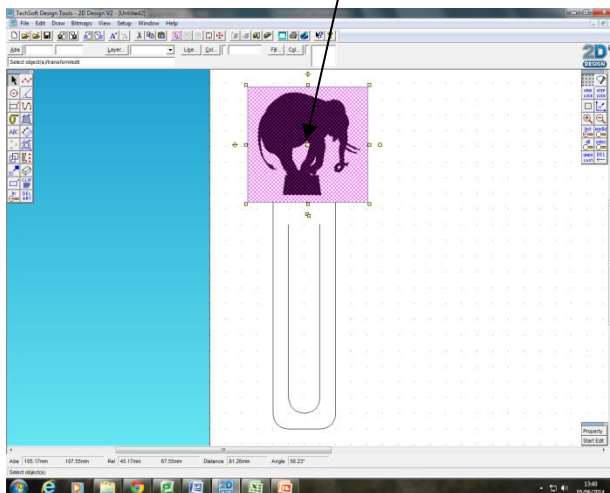
- Find a silhouette you would like to use and open the web page (do not copy it off the search page as these images are not of high enough resolution).
- Copy the image.
- Paste the image into 2D Design.



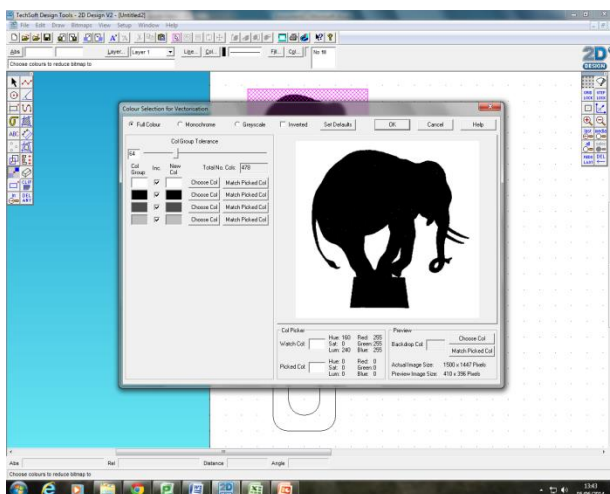
- Right click on the yellow square on one of the corners of the image and resize it.



- Grab the yellow square in the middle of the image and place it where you want it to go on your bookmark.



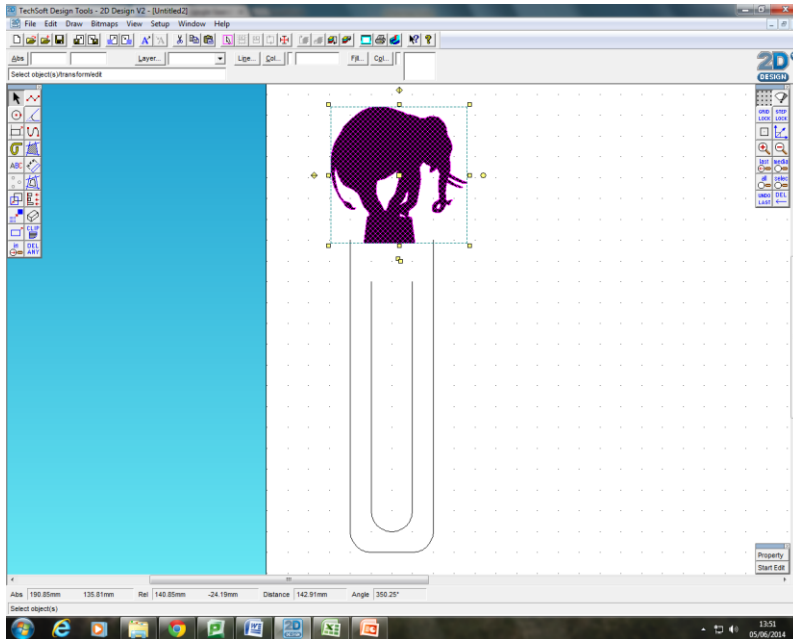
Select the Vectorise tool  and select the image you brought in. This will open a new window.




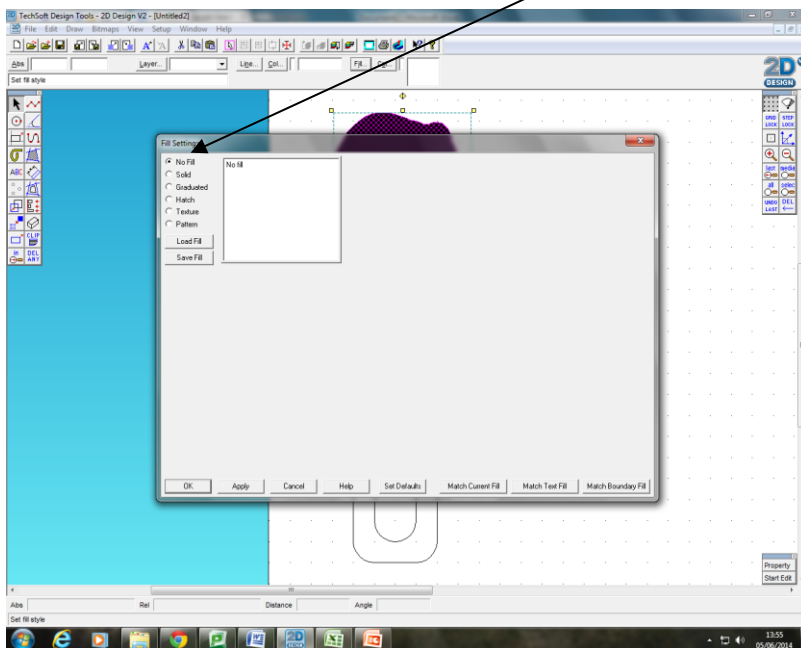
- In the new window select Monochrome, OK and OK.

You will see little difference in you drawing but the properties of the image you brought in have been changed. The image was blobs of colour on the screen (a bitmap) now it has a black outline which is coloured in. It is the lines in the drawing that the laser cutter will follow. These lines are called Vectors.



- Right click and the cursor should change to an Arrow.
- Select the silhouette.

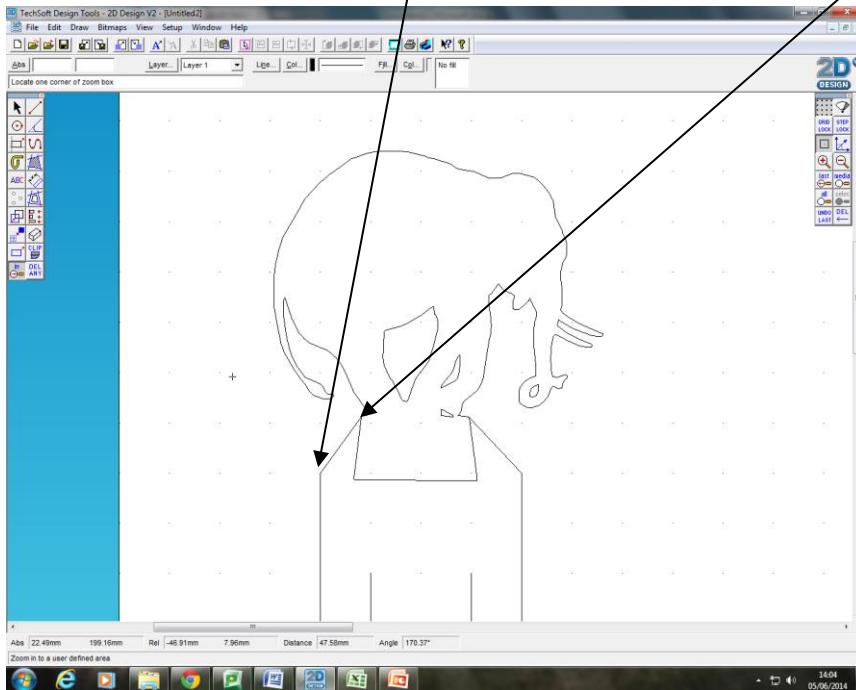



- Select the Fill tool . The Fill tool is near to middle at the top of the screen.
- Select the No Fill option at the top left hand side of the new window and OK.

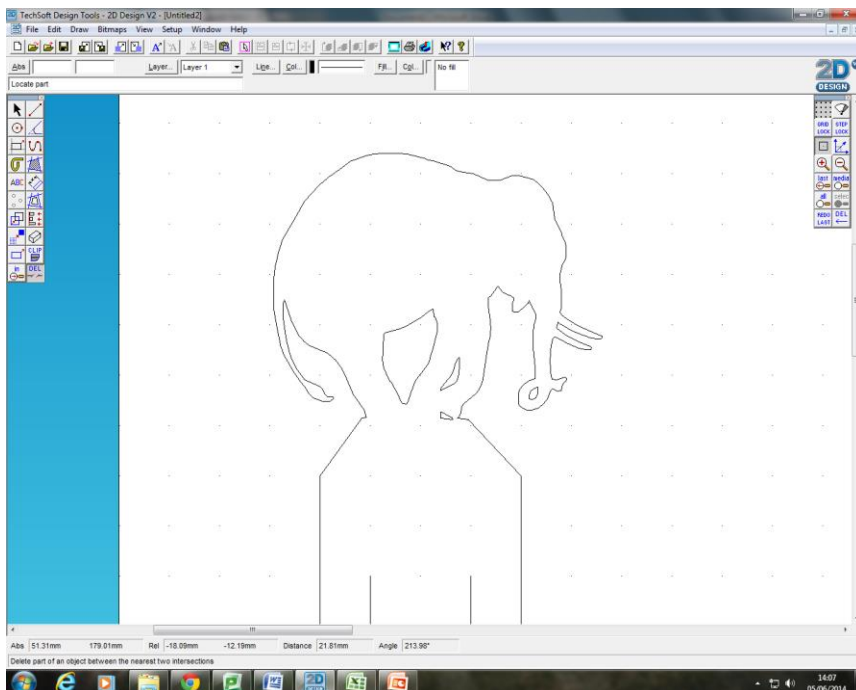


The image should now only be shown as a line.


- Select the Attach tool  from the right hand tool bar.
- Select the Line tool  from the left hand toolbar.
- Draw two lines from the top of the original rectangle to an appropriate place on the silhouette outline.

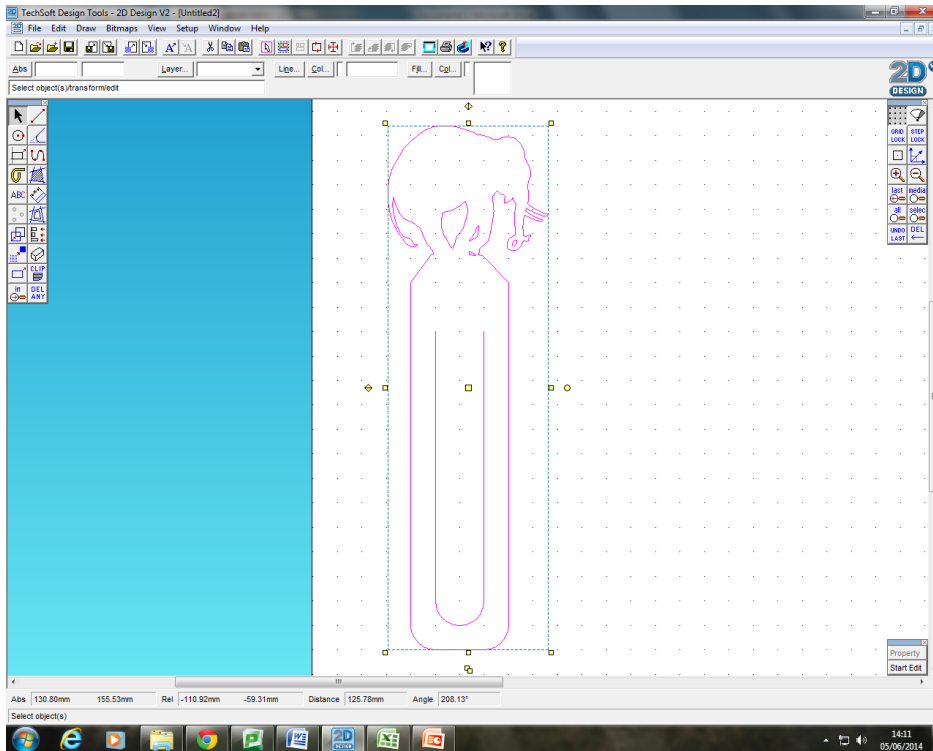




- Select the Delete Parts tool  and delete the lines you do not need. This may take a number of clicks.

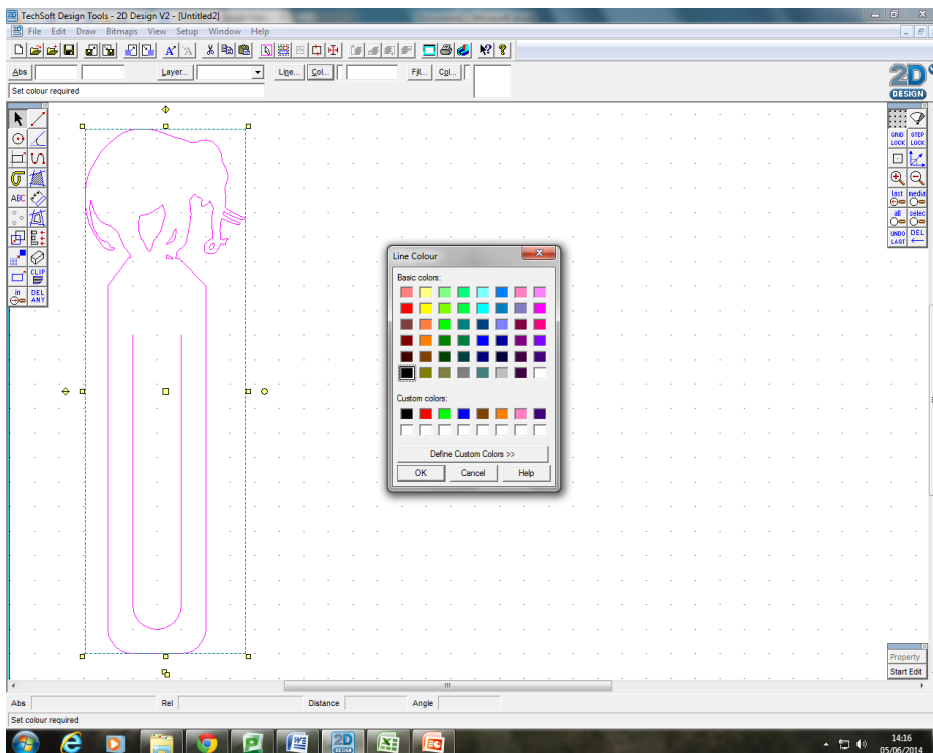




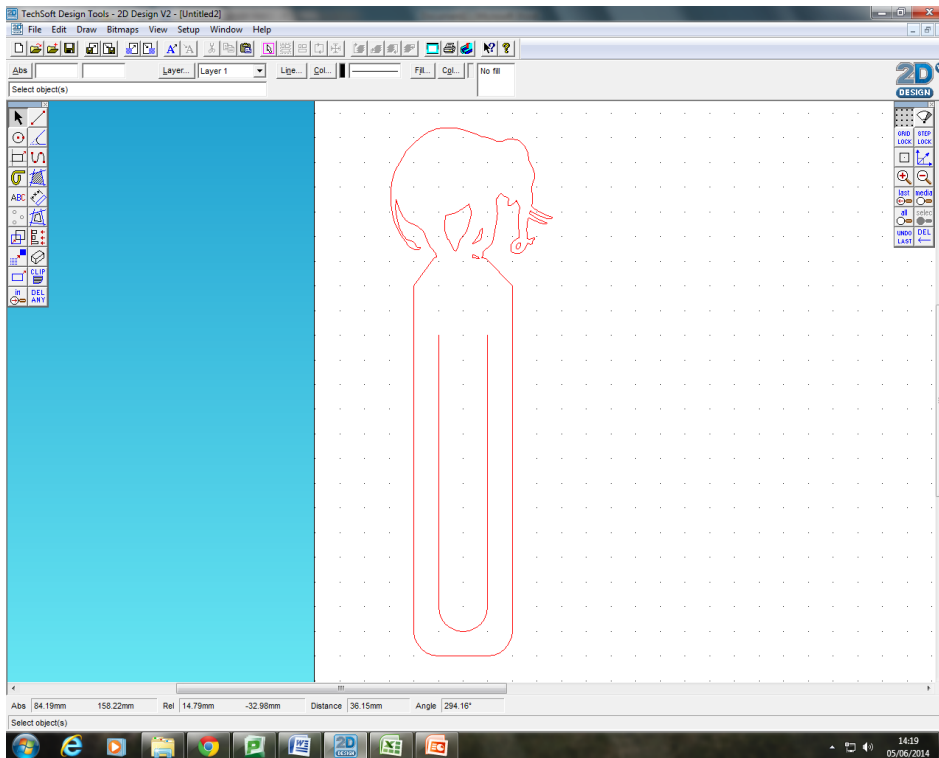
- Select the Select All tool . This tool is near the top, half way towards the left hand side.



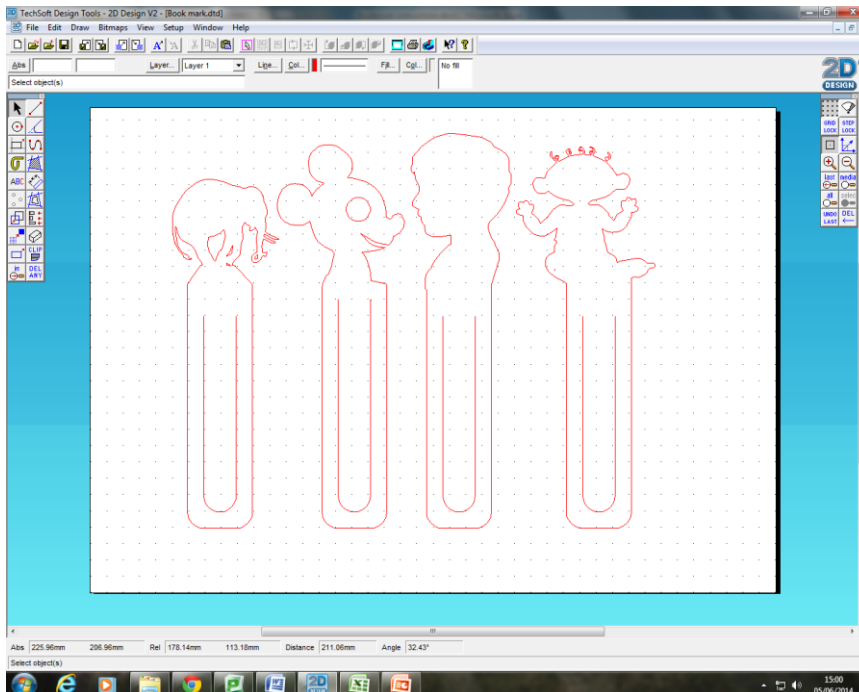
- Select the Group tool . This tool is next to the Select All tool.
- Select the Line colour tool . Try not to confuse this with the Fill colour tool (they are the same graphically).



- Select the red from the Custom colours and OK in the new window.



- Now repeat this process on the three other bookmarks so that you have four completed designs.



- Select File and Save as and create a Folder called D&T for your work.
- Save the drawing as Bookmark with your initials.
- Either email the drawing to or save the drawing on Mr data stick.