

## How to create a map in Open Orienteering Mapper. Section 1 the background Map

Note this is based on using **OpenOrienteering Mapper 0.9.2**. (referred to as OOM below)

The latest version of the software is available to download from:

<https://www.openorienteering.org/apps/mapper/>

Instructions – Note; this is my suggestion, there may well be other methods available.

1. Download and Install OOM
2. Download the appropriate OOM symbol set from British Orienteering:  
[https://www.britishorienteering.org.uk/mapping\\_resources](https://www.britishorienteering.org.uk/mapping_resources)  
If you have admin rights, you can copy and paste the BOF symbol set in the correct scale folder in the OOM program files. (C:/Program Files/OpenOrienteering Mapper 0.9.2/symbol sets/) If not just save somewhere you can locate.
3. Open OOM and go to <File><New>, select the appropriate symbol set:
  - a. If you put the BOF one in the program folder, it will be there to choose.
  - b. If you saved it somewhere else, choose “Load a symbol set from a file..” and browse to your saved location.
4. Georeference the map:  
Find the OS grid position of the area you want to draw, easy if you have a map; alternatively use streetmap:  
<https://www.streetmap.co.uk/> Put in a place name or postcode, streetmap will give you the location of the arrow, e.g. for Knaresborough, it says “Location is at 435500,457500”. You can round to the nearest xxx000. Use this as follows:  
Go to <Map><Georeferencing> and select:  
Coordinate reference system = **by EPSG code**  
Enter EPSG code: = **27700**, this is the code for British National Grid.  
In the ESPG 2770 coordinates, enter the British National Grid location.  
E.g. 435500.00m E 457500.00m N  
You need to set the “Declination”, this is the the difference between magnetic and grid north.  
Use the lookup link on the open OOM page to find it for this position. Note if it is W (west) you have to enter it as a negative value; e.g. 0.68° W, enter as -0.68. In a few years it will be E for this area, and hence a positive value.
5. Go to <View><Display Coordinates as> and select “ESPG 27700 coordinates”. As you move the cursor around the screen, the bottom left hand corner of the screen will display the British National Grid coordinates.
6. Go to <Map><Configure Grid>, click on the “align with grid north” and ensure the horizontal and vertical spacing are both set to 1000.0 m (1km). The gridlines will rotate by the defined declination (as the end of section 4 above).

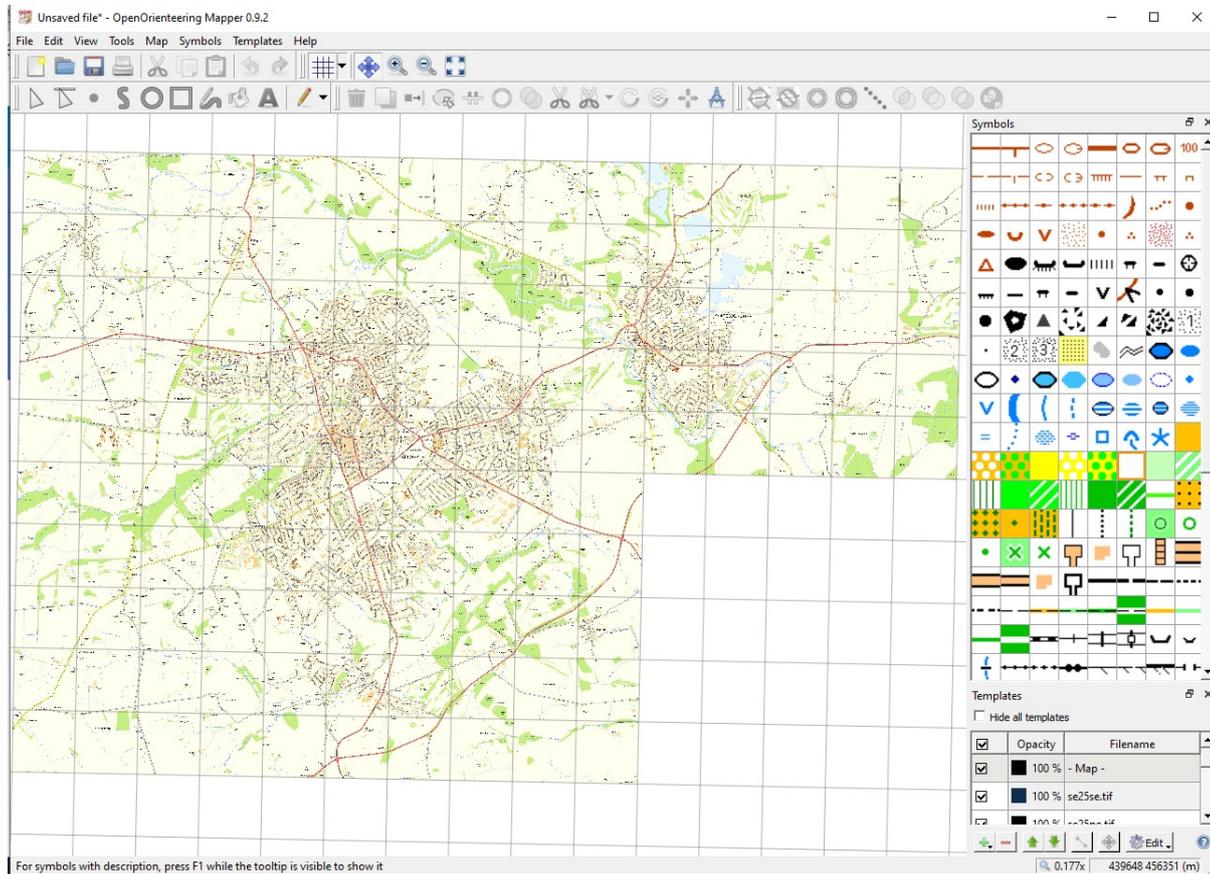
You now have a georeferenced blank map ready for drawing on. You now need to load one or more “Templates” these are layers that you place in the background as tools to draw features. Normally they are pictures. If they are in their own right georeferenced, they will snap to the correct position, if not you have to manually position them. You can download 1:10000 OS maps as .tif – the latest files have geo-referencing built in.

<https://www.ordnancesurvey.co.uk/opendatadownload/products.html>

I will put the Harrogate and Knaresborough ones on the website for you. Each one is a quarter of a 10kmx10km square. The numbering for our OS grid area (SE) is the second digit of the easting and

northing. So for Knaresborough as above SE35 (435500,457500)– there are 4 “tiles” se35sw.tif, se35se.tif, se35nw.tif, se35ne.tif. , the NE and NW tiles cover Knaresborough. se25ne and se25se added to these cover Harrogate.

On the menu go to <Templates><Open Template> navigate to the .tif file and click on <open>. The georeferenced box should already be ticked, click <open> it then asks where the geo-referencing information is; it should show “From Template File” click <OK> and the tile should slot into place on your map. You will end up with something like the image below (or a part of it).



The detail on the OS streetview open maps is not great, but because it snaps to the grid, it gives you something to align other layers to. You can turn the templates on/off view using the toolbox in the bottom right hand corner.

From this point, you can put some more detailed templates in place.

OS 1:25,000 maps. Goto <https://www.bing.com/maps/> change the layer from “Road” to “Ordnance Survey”, then zoom in until the map changes from 1:50,000 to 1:25,000. You can also get this from <https://www.streetmap.co.uk/>

Take a screen shot of the area you want – the windows “snipping tool” app, or the later <Windows key> <shift><S> does this nicely. Include the blue 1km grid lines on the outer edges of the area you want. Save this (default .png file is fine).

Zoom on the map to roughly the area you have on the OS snippet.

Go to <Template><Open> and select the OS .png file (or whatever you saved it as).

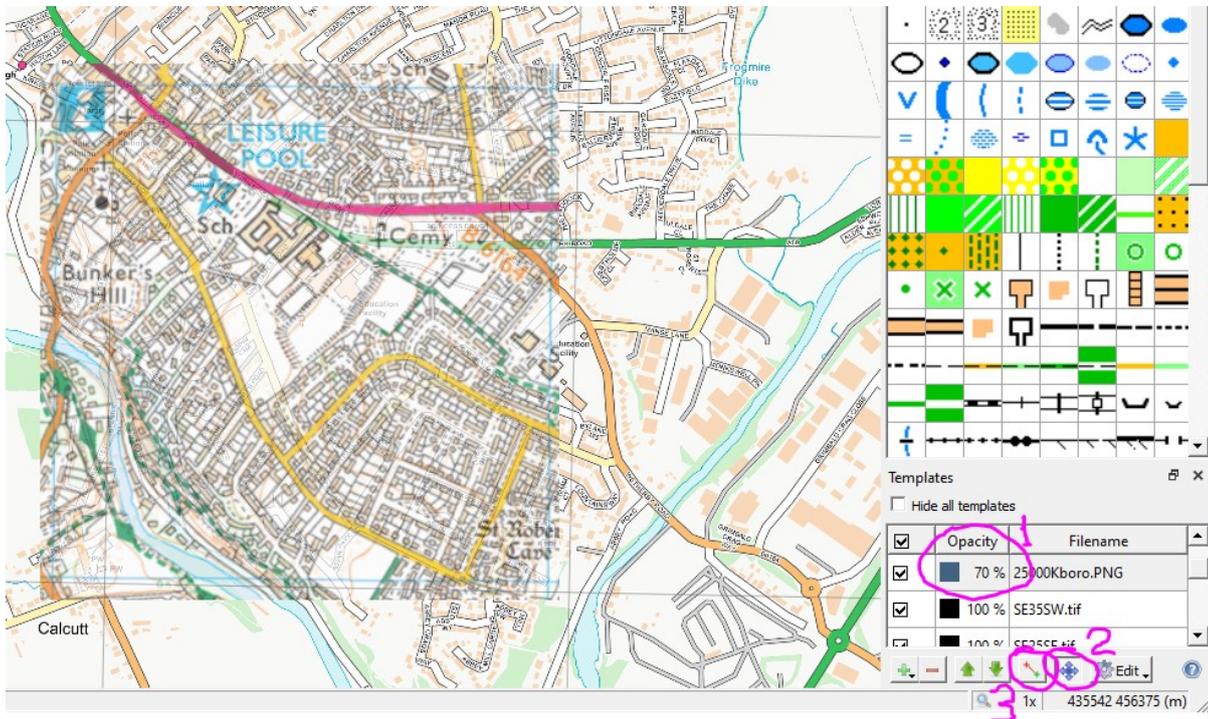
You need to give it a scale, this depends on things like the resolution of your screen. Try 3 meters per pixel. If this is way off remove the template (highlight it in bottom RH corner and click in the red minus sign) and try again with a different value. It doesn’t have to be exact, but somewhere near helps.

Now you need to align it to the grid – highlight the template by clicking on it.

a) change the opacity to 60 or 70% (item 1 below)

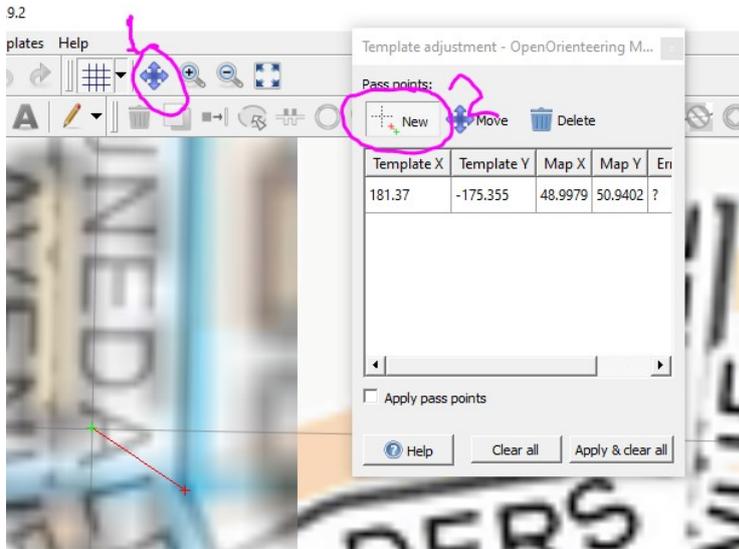
b) click on the move symbol (item 2 below) and drag the image to roughly the right place, using the OS streetview as a guide.

c) Now you need to fine adjust the image using in this case the corners of the grid section. Click on the adjust symbol (item 3 below)



d) You need to alternate between moving and zooming on the map with the main map move icon clicked (item 1 below), then defining the adjustment by clicking on a new pass point (item 2 below).

- With the main move icon clicked, move the map until a corner is visible on the screen
- Put the mouse cursor on this point and use the scroll wheel to zoom in.
- When you can see the grid and the photo corner points in the same view, click on 2 (New Pass point) click first on the image corner, then on the grid corner, the results line shows where the image will move to.
- Click back on the main image move icon (1) NOT the one in the template box.
- Zoom out, find another corner, zoom in and repeat.
- Do this on all four corners, then click on <Apply & clear all>.
- The image will now align – if you are not happy with it, repeat the process – (zoom right in). Close the template adjust window when finished.



You may now want to hide the streetview map, just untick the individual templates in the bottom RH corner template window.

What else might be useful:

The local area planning map has detailed building profiles and boundaries:

<https://uniformonline.harrogate.gov.uk/online-applications/spatialDisplay.do?action=display&searchType=Application>

This has paths in parks, footpath edges to roads etc, and is great for urban maps.

Just untick planning, or change the filter to “today” to get rid of all the red lines (signifying planning applications).



A snip from a Bing, or Google aerial view – see which one has the best image.

You are now ready to start drawing! – check out the next instalment.