



Create new Shape file and setup for digitizing

QGIS 2.4 - WINDOWS 7 - AUGUST 2014

Goal for this lesson:

In this lesson you will learn how to create a shape-file layer.
Digitizing (drawing) polygons in an existing project. Setting options for digitizing, snapping and how to avoid polygons from overlapping.
A few features from **Advanced digitizing toolset** will also be used.

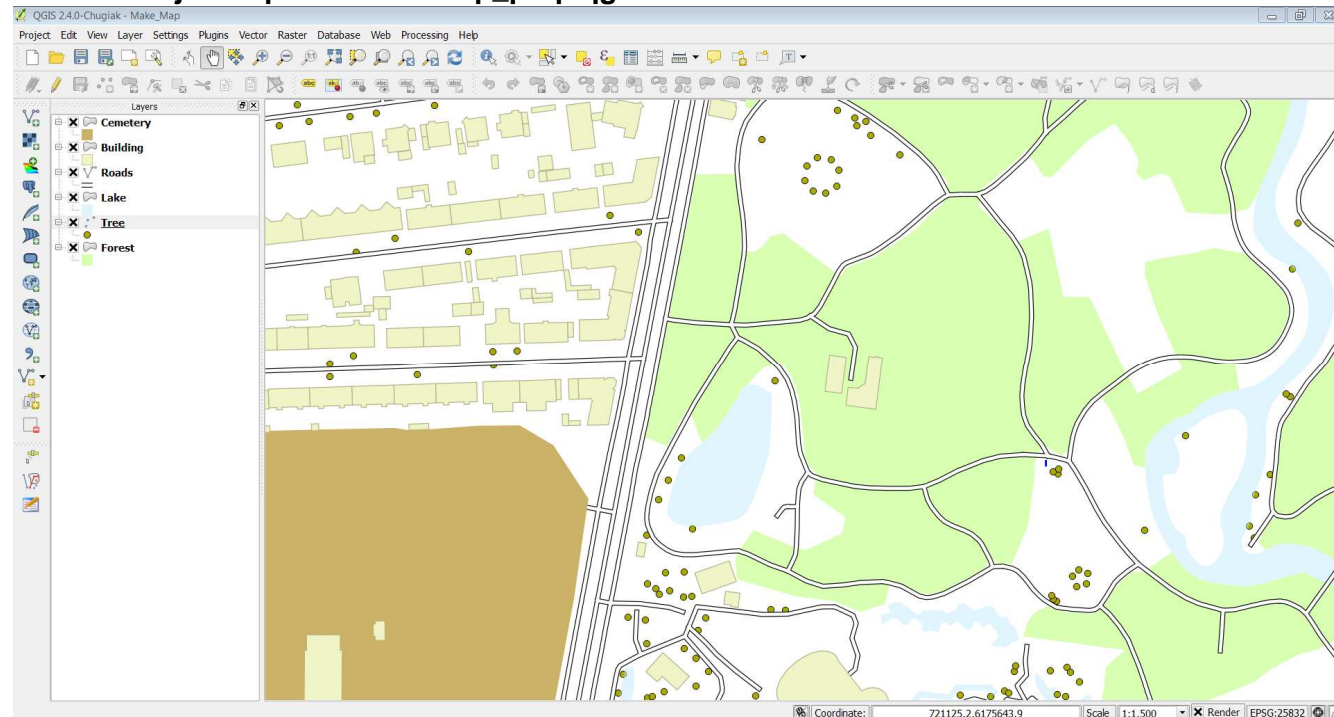
The steps are:

- Open project
- Create a new shapefile
- Setup options for digitizing
- Digitizing
- Advanced digitizing

Data: Map_prep.Zip
Source: FOT data from <http://download.kortforsyningen.dk>

Start lesson

Click on **Project>Open** Choose **Map_prep.qgs**



Create new Shape file

You are going to create a new layer for digitizing polygons with the surface for grass and asphalt. In the file you save both the polygons and attribute-data. So before saving the file, you have to create the attribute table.

In this lesson there are going to be 2 fields in this table:
Id, Theme

Example:

	id	Theme
0	1	Grass
1	2	Grass
2	3	Asphalt
3	4	Asphalt

Click on **Layer>New>Shape file layer**

Choose the type **Polygon**
Specify the CRS

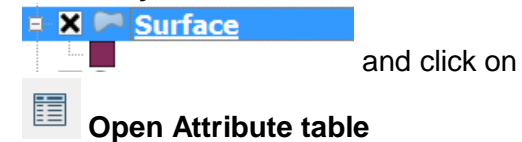
In **Name** write *Theme*
Change **Width** to 20

Click on **Add to attributes list**

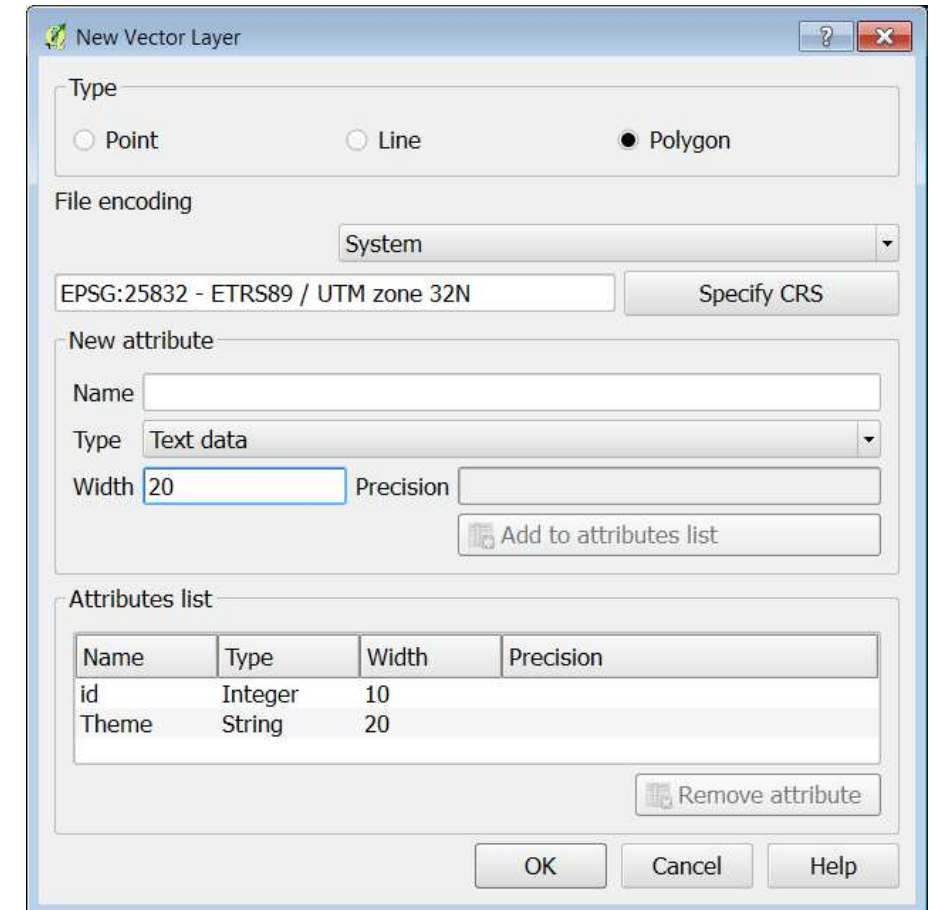
Click on **OK**

Save the file as **Surface**.

In the **Layer** click on





Now you have an empty table with 2 columns.



Start digitizing (drawing)

Zoom in on an area you want to digitize.

Click on  **Toggle editing** see how the other tools are activated.

Click on  **Add feature**

Start the polygon by clicking and continue.
When you get to the last point – **Rightclick**
Fill in the Theme (Grass or Asphalt) in the dialog.

Click on **OK**

Continue to digitize 5 more polygons.

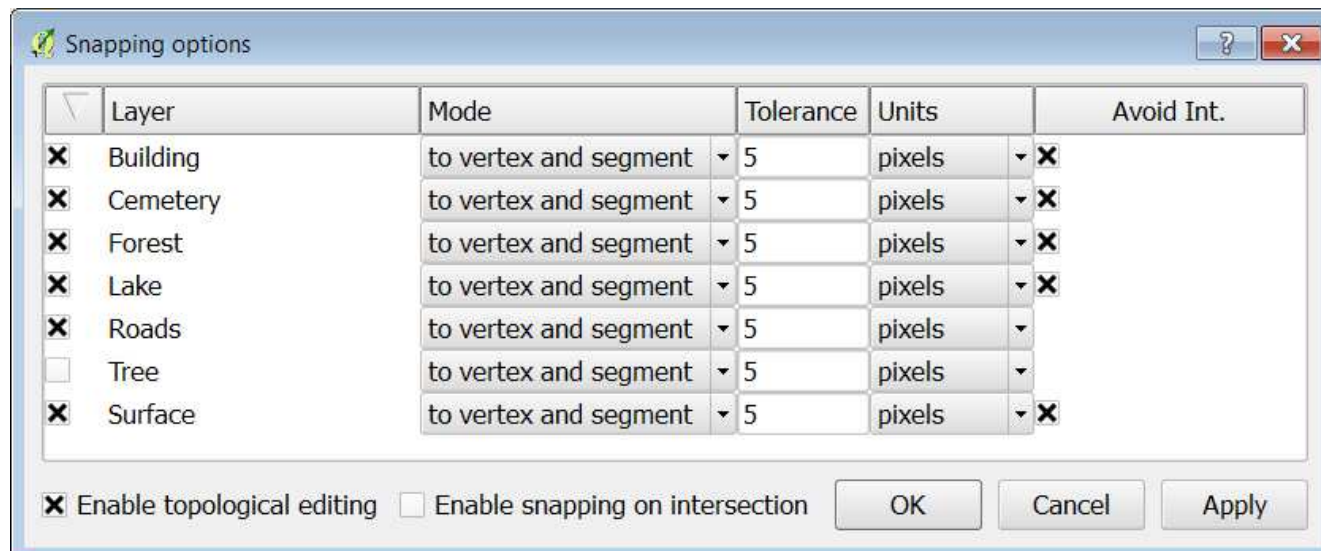
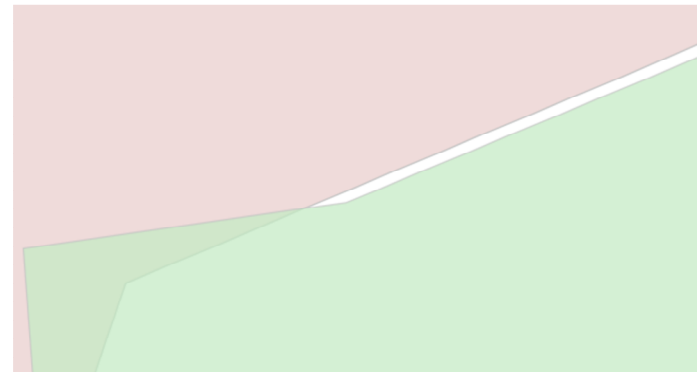
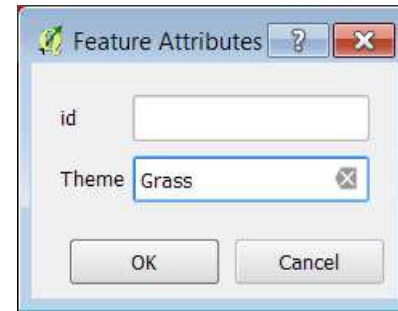
If you digitize next to another polygon, overlap and gaps are difficult to avoid.

In the **Settings**, you can choose to change **Snapping Options**

Click on **Settings>Snapping Options**


Set snapping options as presented in a figure below.

*The Tolerance and units can be set as default in the **Settings>Options>Digitizing**, so you only have to set **Avoid intersection and topological editing***

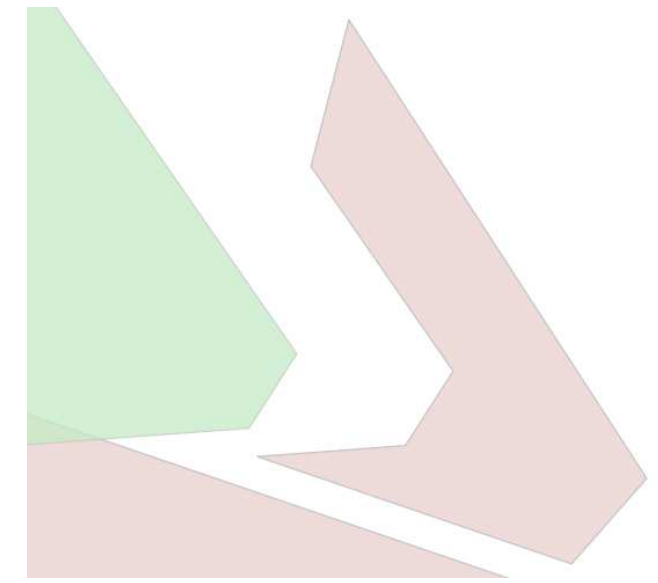


Now start to digitize 3 polygons.

Digitize over existing polygons.

Click on  **Move feature** and see how the new polygon is automatically "clipped" to fit the existing polygon

To move the polygon back to its place use **Ctrl Z (Undo)**



Advanced digitizing tool

The Advanced digitizing toolbar provides more digitizing options.

For clipping a hole (ring) in a polygon:
Click on **Add ring**
Digitize the ring.

For deleting a hole in a polygon:
Click on **Delete ring**
Click on a node or vertex in the hole.

For clipping and adding a new feature in a polygon:
Click on **Fill ring**
Digitize the new feature – rightclick and fill out the dialog.

For adding a part to a polygon – it gives a *multipolygon* – an object with more than one polygon and only one record in the attribute table.
Select a polygon
Click on **Add part**
Digitize a new polygon – there will be no dialogbox

For deleting a part of a multipolygon
Click on **Delete part**
Click on the polygon

For reshaping (adding or deleting) a port of a polygon
Click on **Reshape feature**

For adding Click inside the polygon and digitize outside – end the digitizing inside the polygon.

For deleting Click outside the polygon and digitize inside – end the digitizing outside the polygon.

For splitting a polygon
Click on **Split feature**

Digitize from outside to outside. 2 new polygons and records in the attribute table.

For merging 2 or more polygons to 1:

Select the polygons

Click on **Merge feature**

Select the values for the new attribute-record

