

# An Introduction to GIS Fundamentals

## PART 9. DIGITIZING TOOLS















# QGIS Digitizing Tools

## Digitizing an existing layer

By default, QGIS loads layers read-only. This is a safeguard to avoid accidentally editing a layer if there is a slip of the mouse. However, you can choose to edit any layer as long as the data provider supports it, and the underlying data source is writable (i.e., its files are not read-only).

In general, tools for editing vector layers are divided into a *digitizing* and an *advanced digitizing toolbar*.

## Vector layer basic editing toolbar

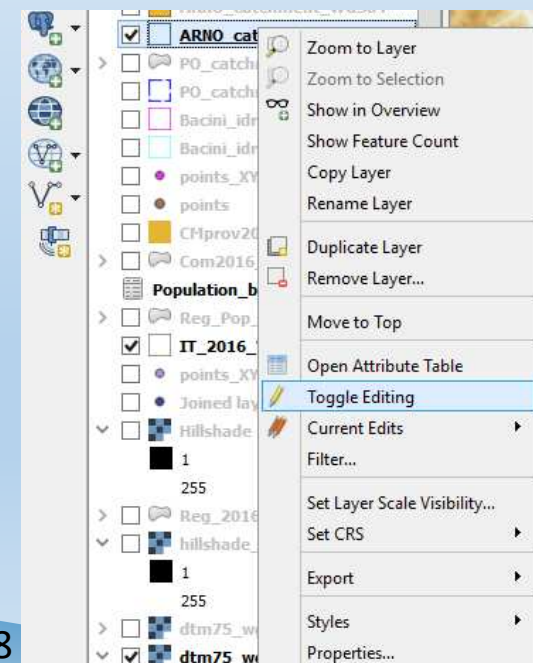
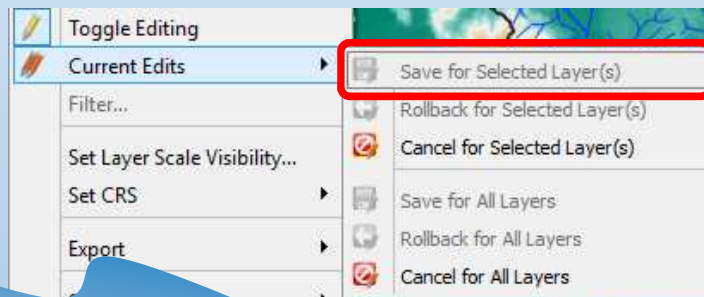
Icon	Purpose	Icon	Purpose
	Current edits		Toggle editing
	Adding Features: Capture Point		Adding Features: Capture Line
	Adding Features: Capture Polygon		Move Feature
	Node Tool		Delete Selected
	Cut Features		Copy Features
	Paste Features		Save layer edits

# QGIS Digitizing Tools

All editing sessions start by choosing the **Toggle editing** option. This can be found in the context menu after right clicking on the legend entry for a given layer.


Alternatively, you can use the Toggle editing button from the digitizing toolbar to start or stop the editing mode. Once the layer is in edit mode, markers will appear at the vertices, and additional tool buttons on the editing toolbar will become available.

Tip: Save Regularly! Remember to **Save Layer Edits** regularly. This will also check that your data source can accept all the changes.

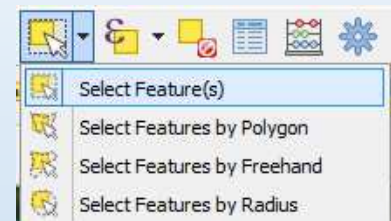




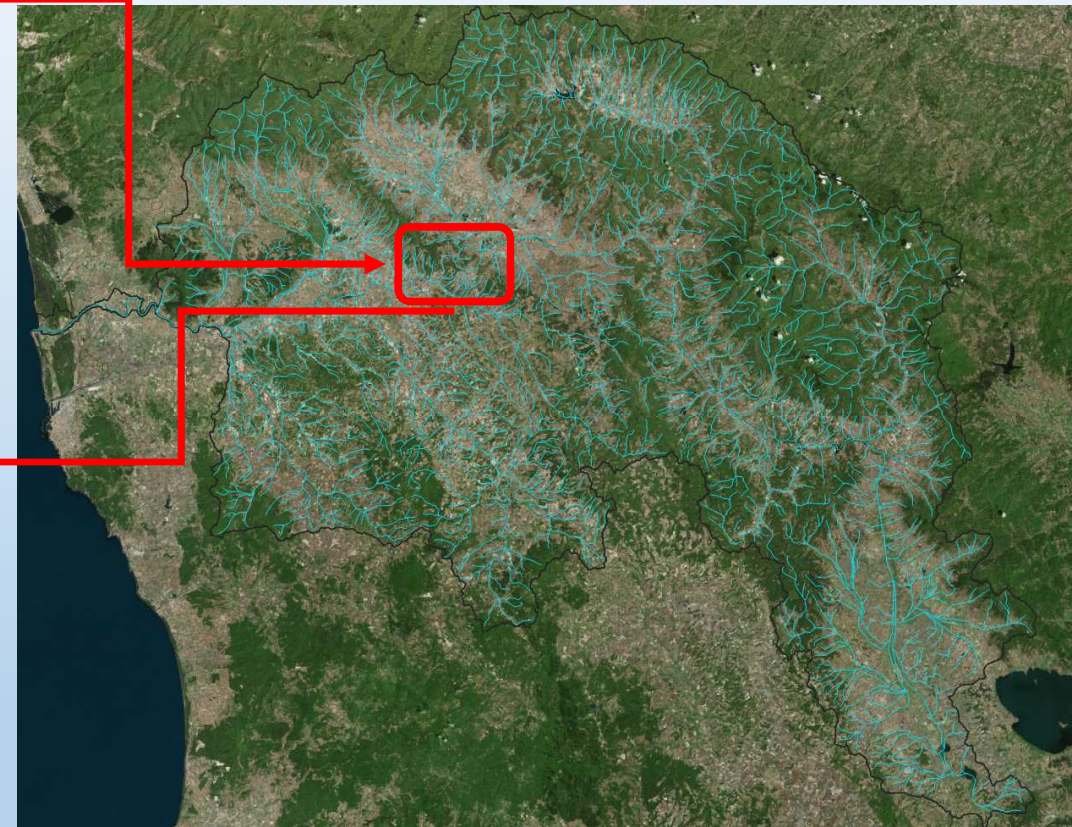
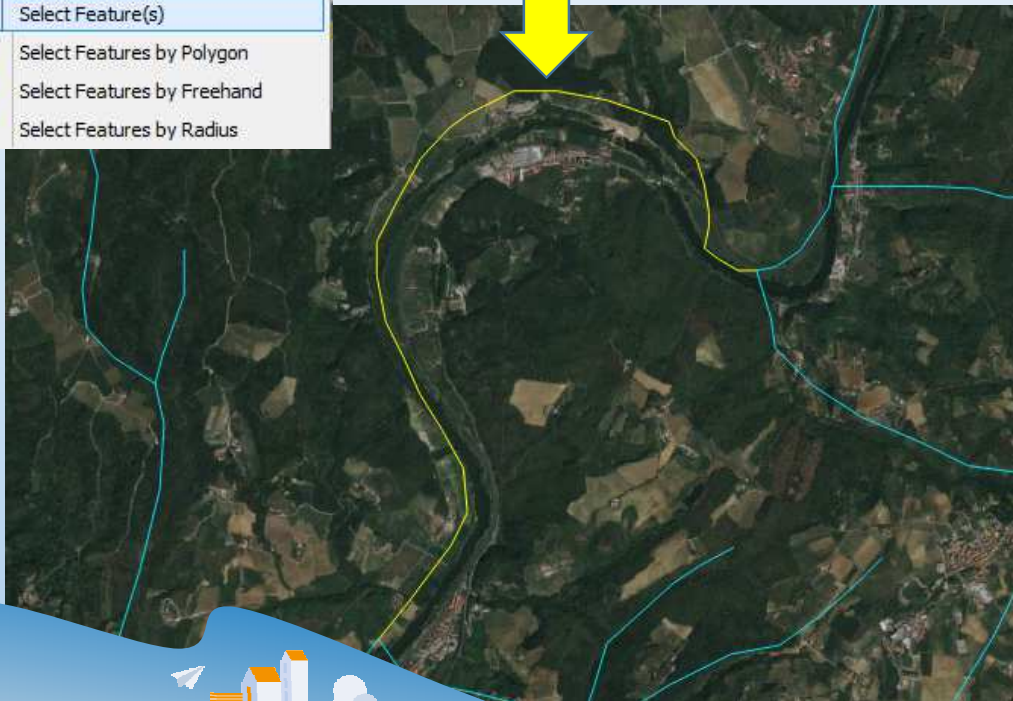
# QGIS Digitizing Tools

Right click on “reticolo\_ARNO” and activate the Toggle Editing 

Load the Bing satellite layer and zoom here



Select this tract of the river



Try to modify the linear element selected

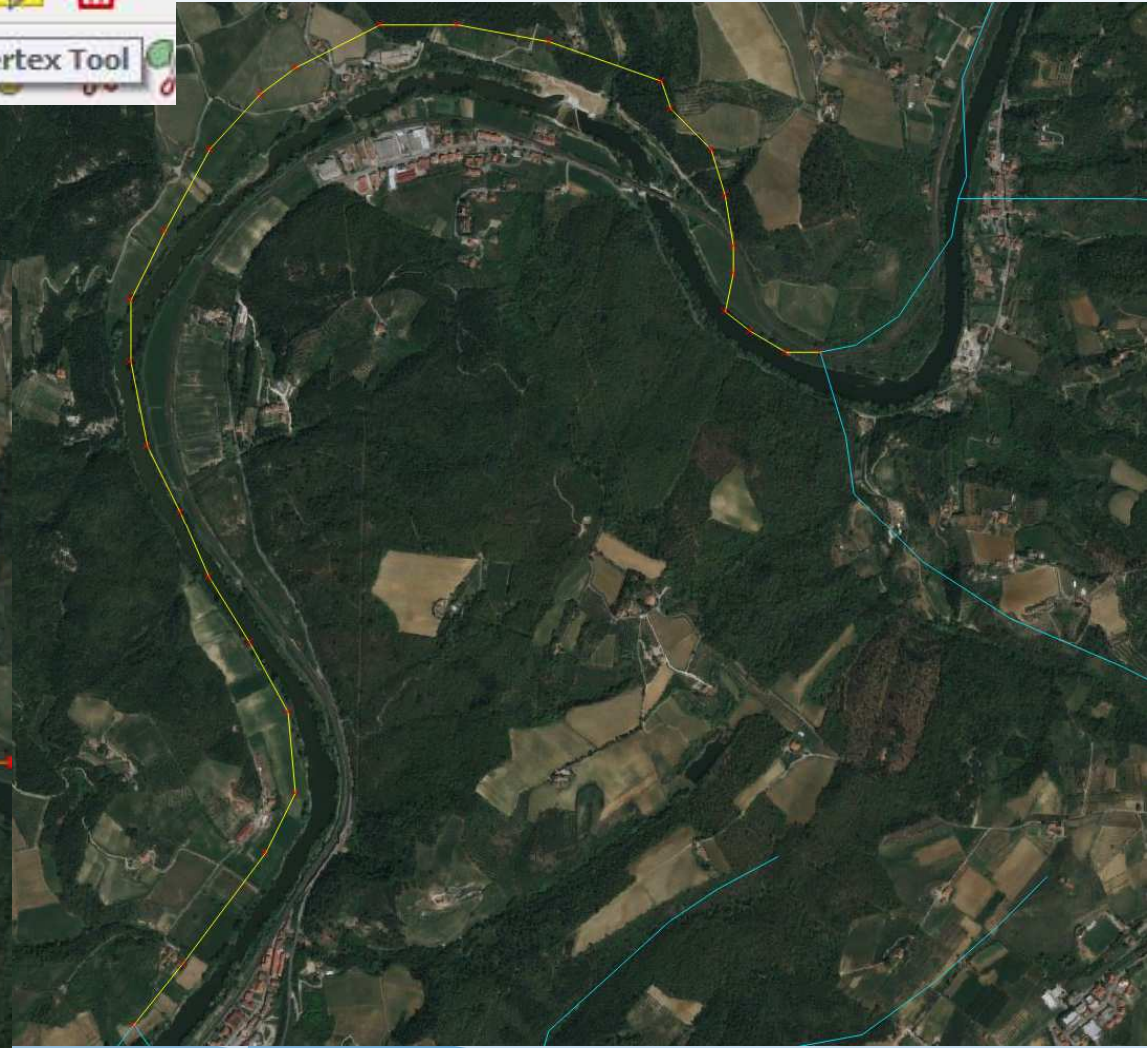
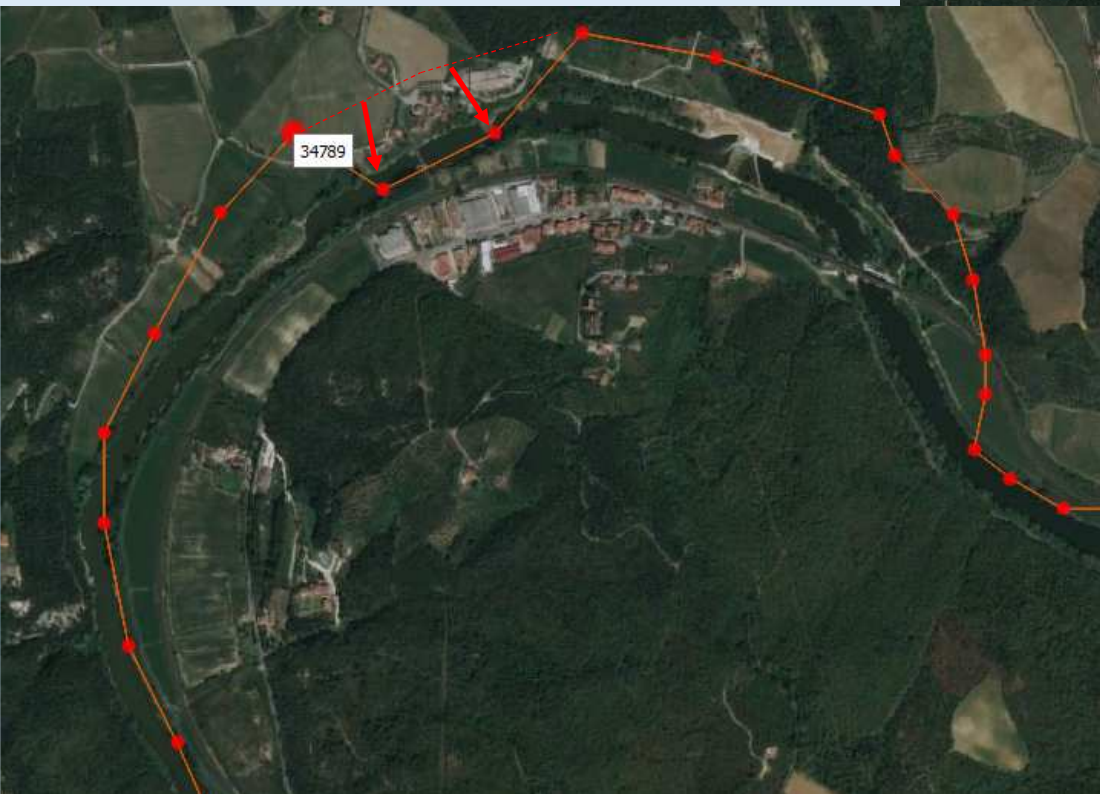


# QGIS Digitizing Tools

Zoom to the selected feature X

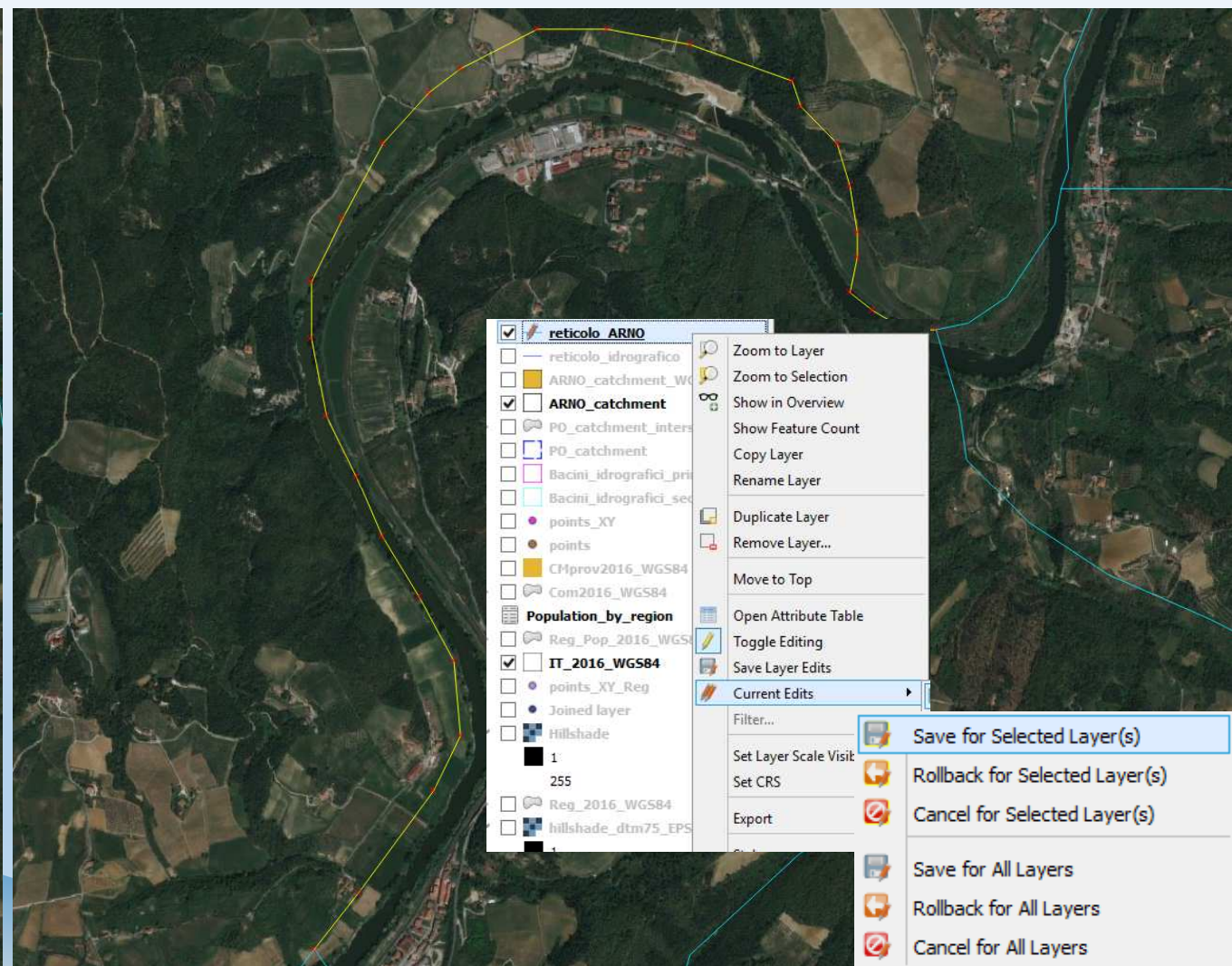
Activate the **Vertex tool**

Left click on the ● and then move the cursor to the desired position





# QGIS Digitizing Tools

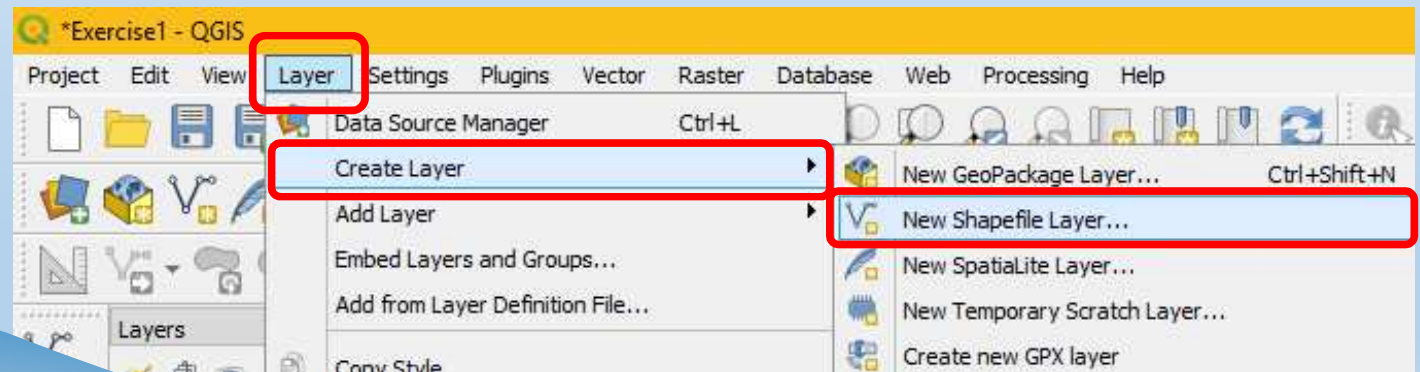


# QGIS Digitizing Tools **Create a new layer**

You can use the Point Add Feature, Line Add Feature or Polygon Add Feature icons on the toolbar to put the QGIS cursor into digitizing mode.

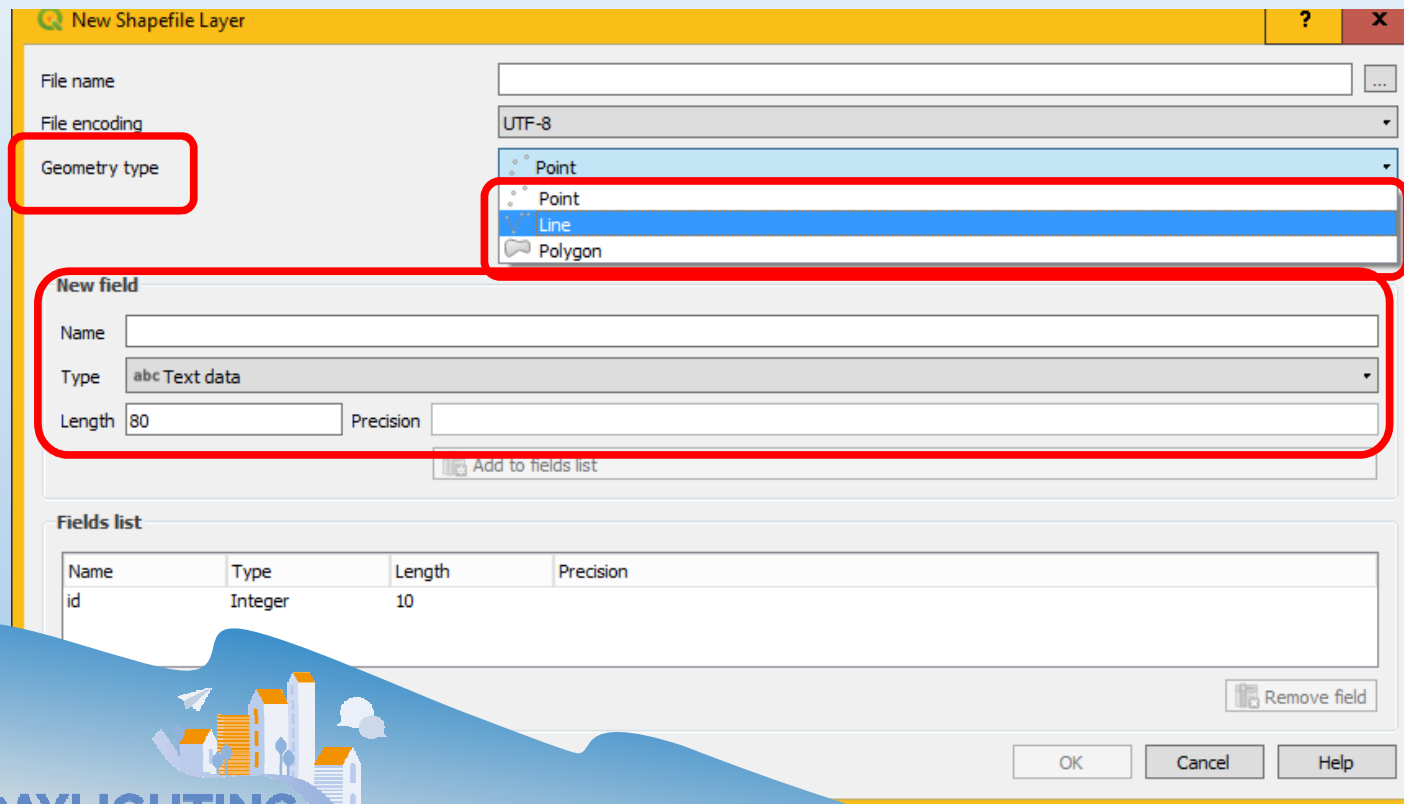
For each feature, you first digitize the geometry, then enter its attributes. To digitize the geometry, left-click on the map area to create the first point of your new feature.

For lines and polygons, keep on left-clicking for each additional point you wish to capture. When you have finished adding points, right-click anywhere on the map area to confirm you have finished entering the geometry of that feature.



# QGIS Digitizing Tools **Create a new layer**

For each feature, you first digitize the geometry, then enter its attributes. To digitize the geometry, left-click on the map area to create the first point of your new feature.



**New Shapefile Layer**

File name:

File encoding: UTF-8

Geometry type: **Line**

**New field**

Name:

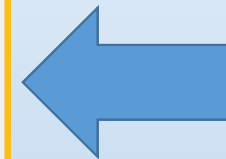
Type: abc Text data

Length: 80 Precision:

**Fields list**

Name	Type	Length	Precision
id	Integer	10	

File name «Affrico» click on «...» to specify the whole path!



Create a line vector

We have to add a new field  
Type Text data, name «Status»

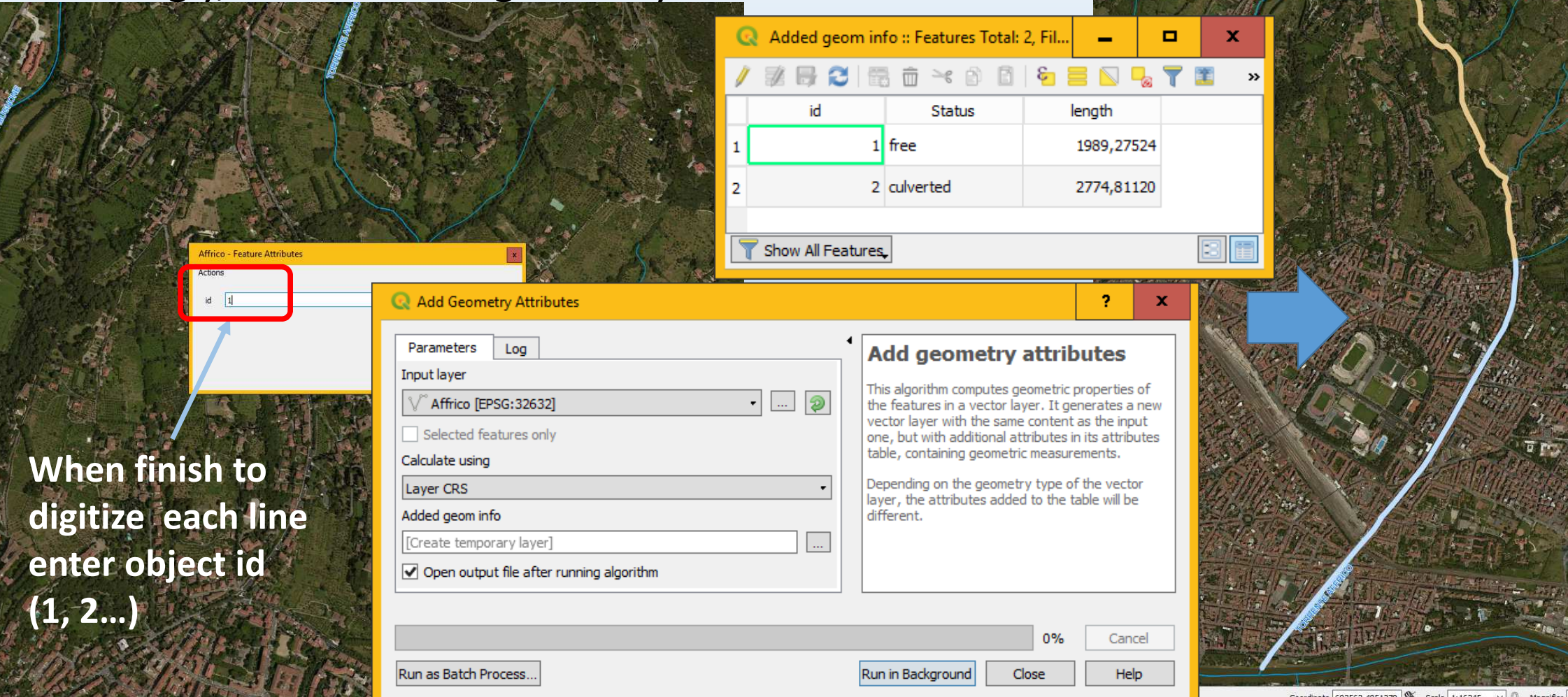






# QGIS Digitizing Tools **Create a new layer**

Create two linear objects in the same vector, classify accordingly, and calculate geometry



The screenshot shows the QGIS interface with a satellite map background. A blue line representing a road is visible. A yellow dialog box titled 'Add Geometry Attributes' is open, showing the 'Parameters' tab. The 'Input layer' is set to 'Affrico [EPSG:32632]'. The 'Calculate using' dropdown is set to 'Layer CRS'. The 'Added geom info' dropdown is set to '[Create temporary layer]'. The 'Open output file after running algorithm' checkbox is checked. A progress bar at the bottom shows 0% completion. To the left, a smaller yellow dialog box titled 'Affrico - Feature Attributes' is open, showing a table with two rows. The first row has 'id' 1 and 'Status' 'free'. The second row has 'id' 2 and 'Status' 'culverted'. A blue arrow points from the 'Add Geometry Attributes' dialog to the 'Affrico - Feature Attributes' dialog.

**When finish to digitize each line enter object id (1, 2...)**

	id	Status	length
1	1	free	1989,27524
2	2	culverted	2774,81120

Added geom info :: Features Total: 2, Fil...

Show All Features

**Add geometry attributes**

This algorithm computes geometric properties of the features in a vector layer. It generates a new vector layer with the same content as the input one, but with additional attributes in its attributes table, containing geometric measurements.

Depending on the geometry type of the vector layer, the attributes added to the table will be different.

0% Cancel

Run as Batch Process... Run in Background Close Help