



## **Module : . Site Suitability Analysis**

Name	Expectation
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CRS	EPSG:3857
Buffer Severity: Zone	Fixed Distance Buffer
Spatial Operations	Clip, Intersect, select by location
Dissolve Buffer	Yes
Main road filter	"highway" is not NULL AND "highway" not in ( 'unclassified', 'track', 'path', 'footway')

### More about

Spatial analysis lies at the heart of GIS. It allows users to answer questions like "What is it?", "What is that?", "What spatial patterns exist?". Spatial analysis allows us to add value to information. Spatial analysis can be broadly classed into the following categories

- Analysis of Discrete point patterns
- Analysis of data that is spatially continuous
- Analysis of area data, spatial data that has been aggregated into areal units e.g. census zones

Most of the spatial analysis techniques require data to be in a projected reference system. When undertaking spatial analysis it is imperative to use the right tool to do an analysis as they are usually multiple tools that produce slightly different results. Once a user has completed the task and noted the steps that they undertook to achieve the results, QGIS provides tools which allow the steps to be automated and store the procedure either as Models or Scripts in the processing.

### Check your knowledge:

1. What is the difference between an attribute based search and spatial selection:
  - a. They are both the same
  - b. Spatial selection is more accurate than attribute selection
  - c. Spatial selection uses the geometry of the layer to do it's search while attribute based search only uses the contents of the attribute.
2. Which of these represent a spatial operation:
  - a. Digitising a route that shows the path from my house to the bar.
  - b. Calculating the shortest distance between my girlfriend's house and my parents house.
  - c. Deleting columns from an attribute table
3. Joining a non spatial layer to a spatial layer is a type of spatial analysis:
  - a. True
  - b. False

### Further reading:

- Automating\_Vector\_and\_Raster\_Workflows\_using\_the\_Graphical\_Modeler\_in\_QGIS:  
[http://gracilis.carleton.ca/CUOSGwiki/index.php/Automating\\_Vector\\_and\\_Raster\\_Workflows\\_using\\_the\\_Graphical\\_Modeler\\_in\\_QGIS](http://gracilis.carleton.ca/CUOSGwiki/index.php/Automating_Vector_and_Raster_Workflows_using_the_Graphical_Modeler_in_QGIS)

- Modeler\_tw [https://docs.qgis.org/2.14/en/docs/training\\_manual/processing/modeler\\_tw.html](https://docs.qgis.org/2.14/en/docs/training_manual/processing/modeler_tw.html)
- Geo-processing-in-qgis: <https://infogeoblog.wordpress.com/2013/01/08/geo-processing-in-qgis/>