



Top 5 QGIS Plugins!

by David Crowther

In the past when working for organisations whose GIS architecture was locked into single vendor contracts, the use of additional plugin tools was often limited. This was mainly due to plugins either requiring additional expertise/training to utilise them or often because their cost was prohibitive. This meant that undertaking more complex GIS tasks such as point to point routing, 3D analysis and web mapping was often expensive and limited to those staff who had access to the restricted licenses.

However, in the advent of Open Source alternatives, we now have a limitless supply of plugins for applications such as GeoServer and QGIS. We can now undertake both simple GIS routines as well as complex routing, interpolation and 3D analysis using a suite of tools that are not vendor specific and wont impact on already tight budgets.



So having now had the opportunity to release the shackles and explore Open Source GIS tools, I wanted to share with you my top 5 QGIS Plugins!

At **number 5**....slightly cheating here, but I have chosen two QGIS Plugins which allow you to search for addresses/locations more easily:

Zoom to Postcode / Quick Finder

Living in a world with Google Maps, you may think finding an address or other geographic locations is the simplest function to undertake. However, for many years, desktop GIS has never made it easy for users to find addresses. Indeed, in some cases this would either require additional development to create Address Searching tools, or for users to understand Structured Query Language (SQL) to interrogate Address Tables.

My top QGIS plugins for finding address's is the Zoom to Postcode and Quick Finder tools.





Using the **Zoom to Postcode** Tool, you can type any UK postcode and the map will auto pan to that postcode location:



And using the **Quick Finder** Tool you can even type a **town name** or **full address** reference:



The Quick Finder Tool also finds **nonresidential locations**, e.g. Superstore locations.



Finding locations within a GIS has never been so easy!



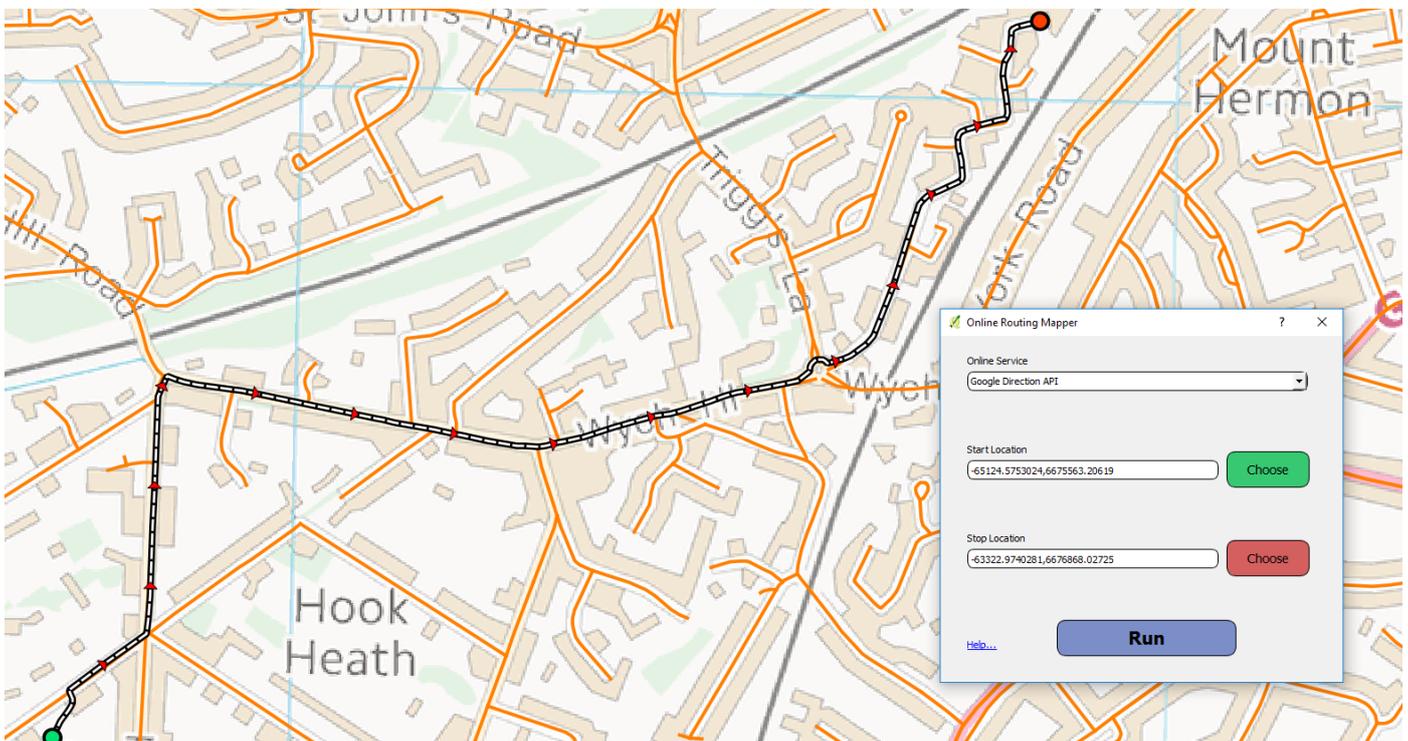


At **number 4** I have chosen a QGIS Plugin which will perform routing operations using an online engine and online road network.

Online Routing Manager

Historically in order to undertake routing analysis within GIS, you would need to install separate routing applications e.g. MapInfo Drivetime or ESRI Network Analyst, as well as have a topologically correct road network e.g. Tele Atlas, Navteq, ITN etc..

Using the Online Routing Manager the overhead for additional software and complex road networks has now been removed. Choose the Online Service, including; Google, Here Routing and Your Navigation, and then simply click in the map to define the start and end locations. The results of the optimum route will then be added into the map window.



If you want to explore more complex routing options e.g. optimising routes and/or using your own road networks e.g. for safest walking routes then I would recommend the **Road Graph Plugin**, **OSM Route tool** and **Pgrouting**.



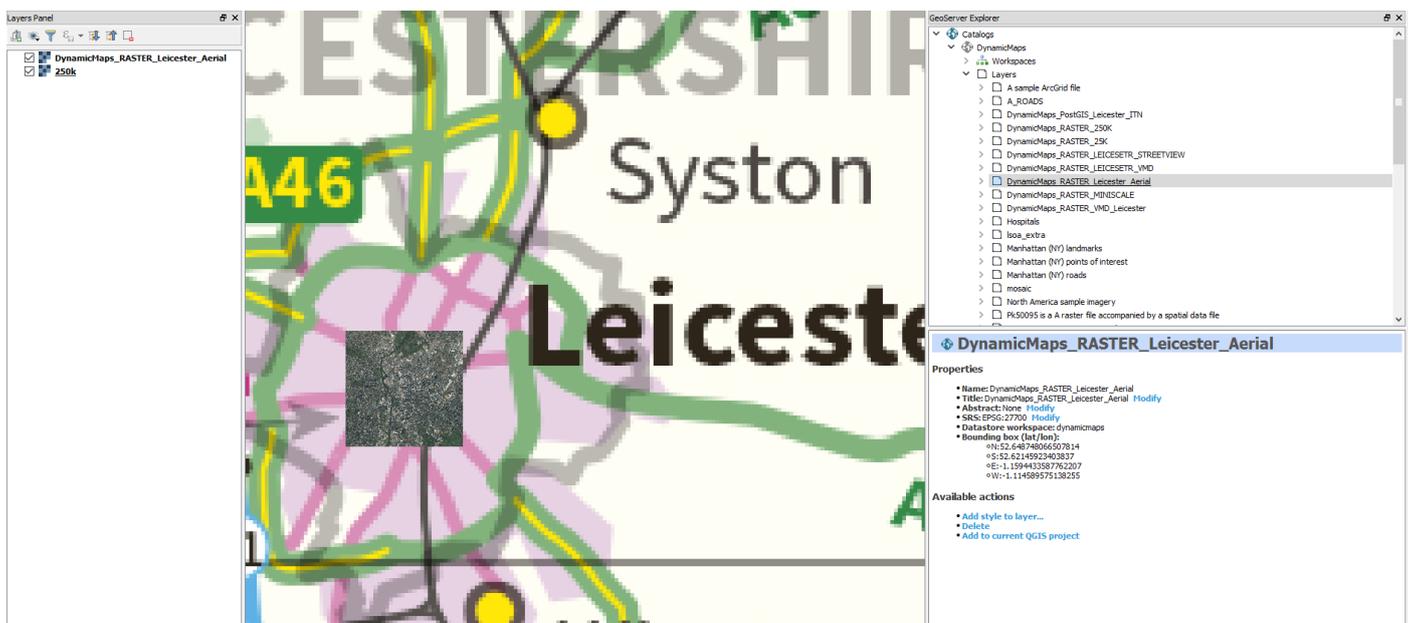


At **number 3** I have chosen a QGIS Plugin that allows you to easily integrate GeoServer with QGIS.

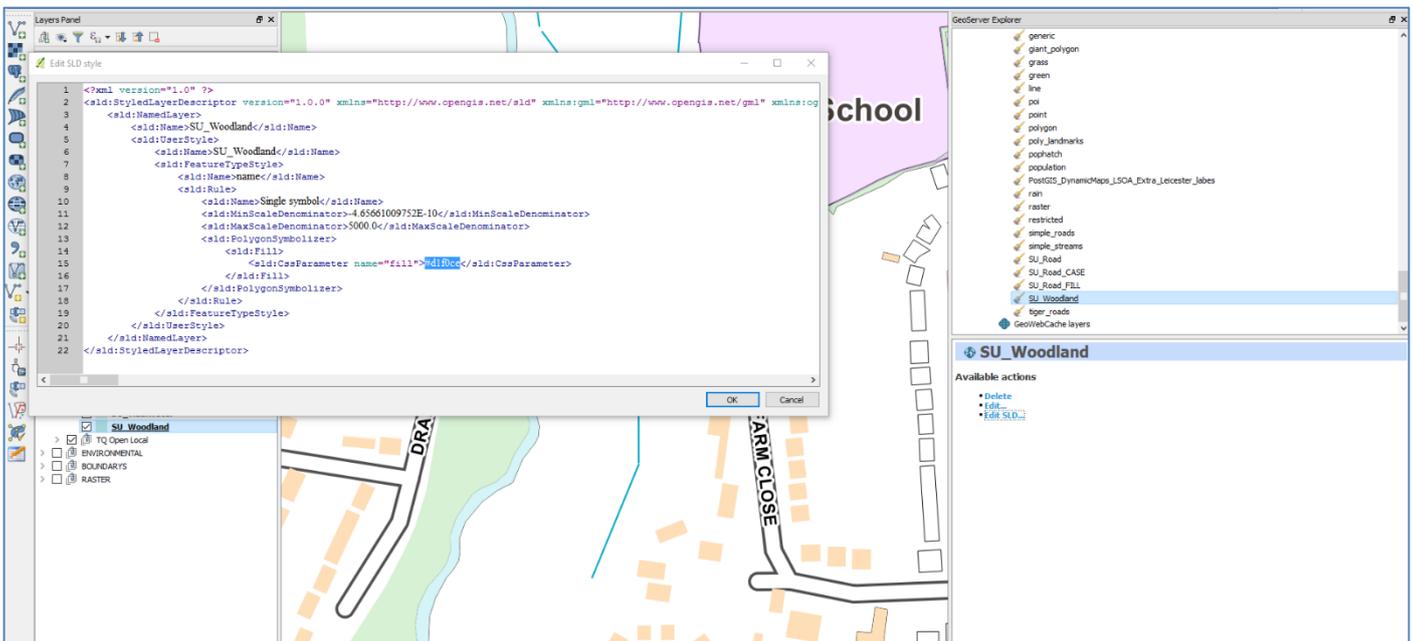
GeoServer Explorer

This plugin tool is a great way for non-GeoServer experts to interact with WMS layers and SLD Styles within your GeoServer setup. It requires limited GeoServer experience and provides a user interface that embeds directly into QGIS so that you can quickly open and configure your WMS layers.

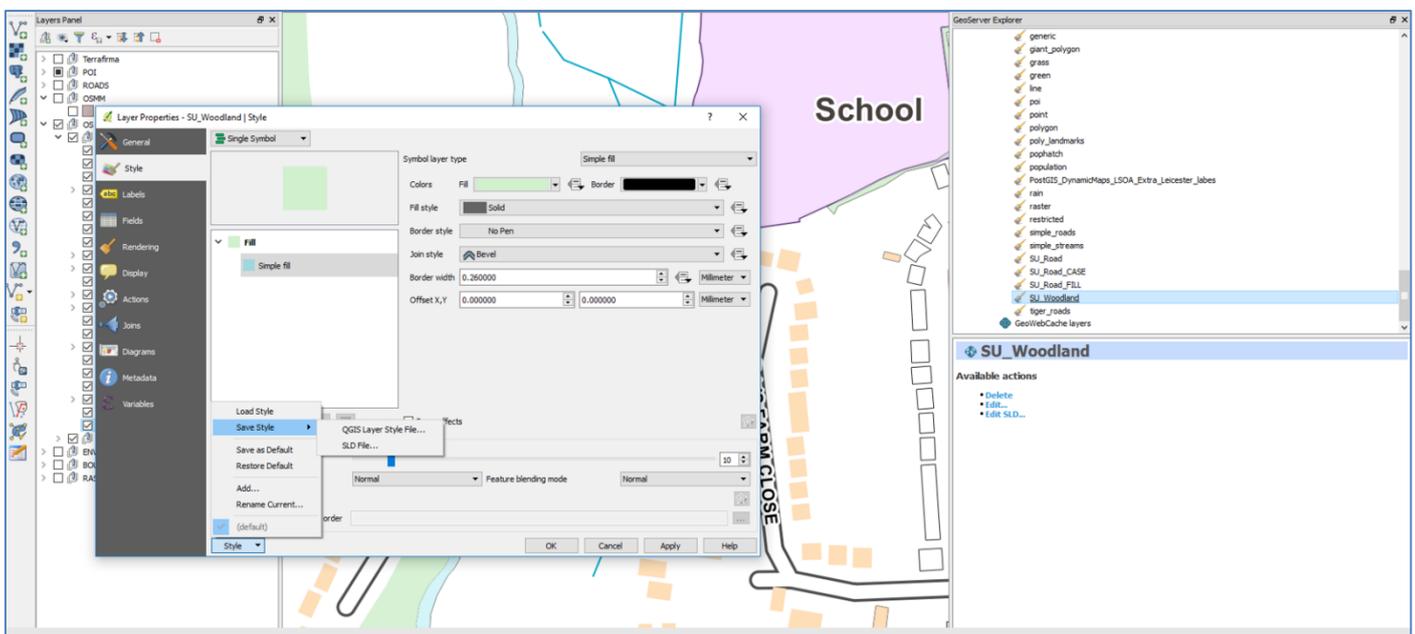
Having opened the GeoServer Explorer interface you can now simply drag and drop a WMS layer, e.g. Raster Aerial imagery, and add that as a layer into your QGIS project. You can also easily create Data Layers in GeoServer by simply dragging a vector layer from the Layers Panel into the GeoServer Plugin, creating a **WMS Layer** instantly.



In addition, using the **Edit SLD** option you can also directly access the SLD properties within QGIS and either make a change to the style of features by directly editing the XML,....



or more simply, by using the **Style Editor** within the **QGIS Layer Properties** window, you can make simple changes to styles and write those directly back to GeoServer by either updating existing or creating new Style Files.

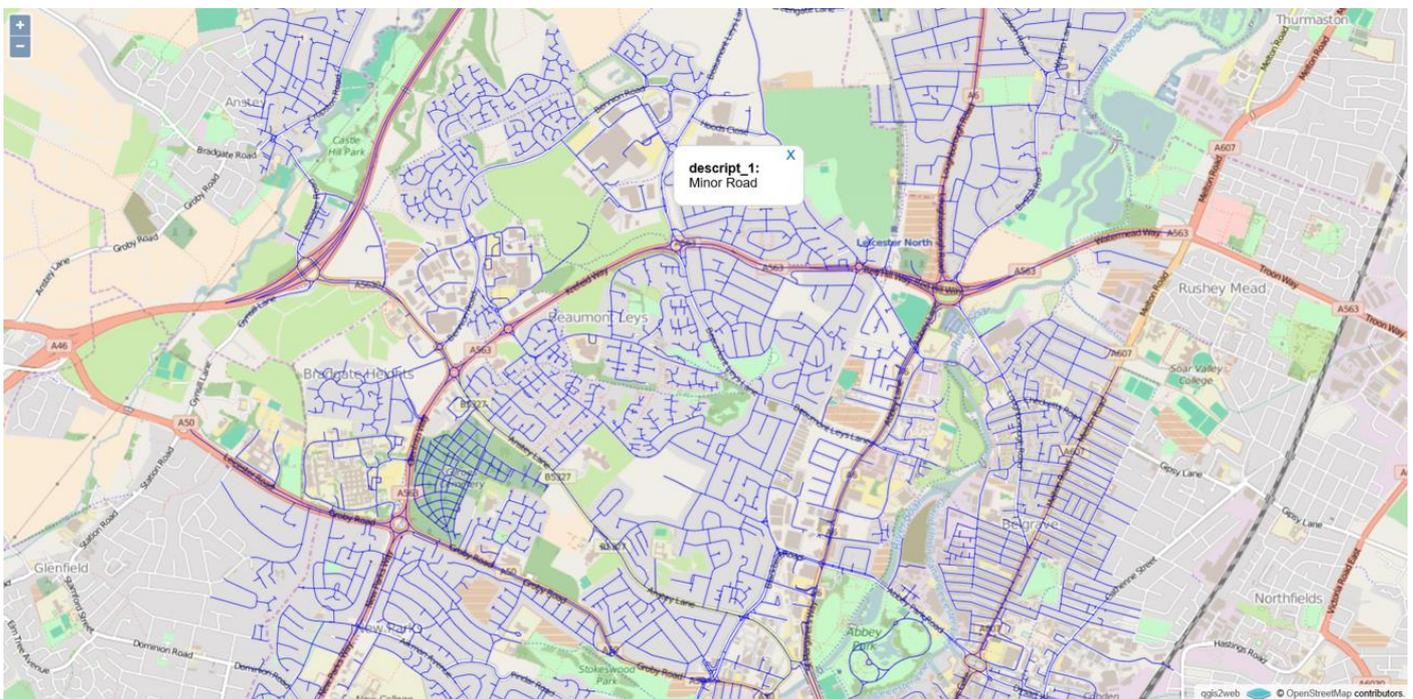




At **number 2** I have chosen a QGIS Plugin that allows you to create web maps from any of your QGIS projects.

Qgis2Web

This plugin tool allows you to export the current contents of your QGIS project, including point, line, polygon and raster layers and create a HTML web page which allows you to view and interrogate your GIS layers in a web map.



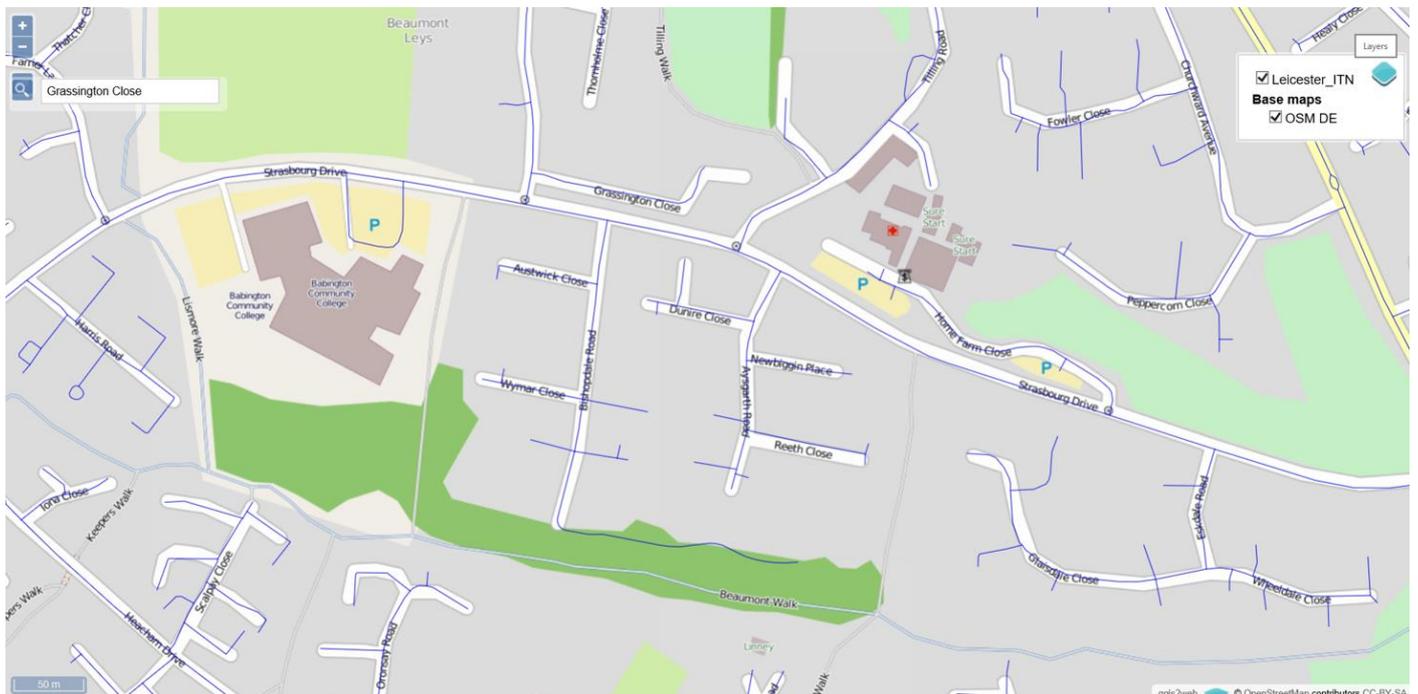
You have the option to choose different basemaps, e.g. OpenStreetMap Standard, OSM Hot, Open Weather Maps, Water Colour and Terrain.





There are also options allowing you to choose:

- which layers to export (show in the web map),
- which attributes to show within the Information bubble,
- whether you wish to use OpenLayers 3 or Leaflet,
- to show the Scale Bar and Layers List,
- and to provide an Address Search.



And finally at **number 1** I have chosen a QGIS Plugin that allows you to create 3D Maps!!

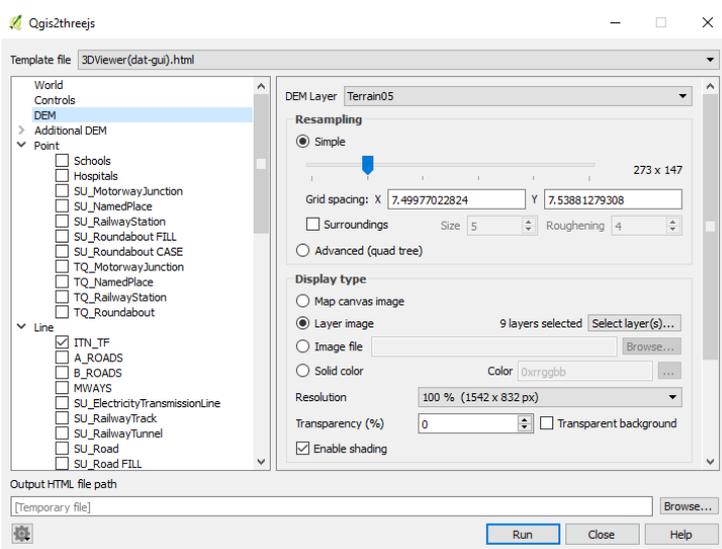
Qgis2ThreeJS

This plugin tool allows you to export the current contents of your QGIS project, including point, line, polygon and raster layers into a 3D map window.



The options allow you to define the following options:

- Which layers to export to the 3D map,
- Which file to use for the DEM,
- The background map/layer to drape over the DEM,
- The Resolution of the output HTML page,
- Any Transparency required,
- Options for extruding vector geometry as 3D objects. In this case using OSMM building height attributes.





Now its your turn!

Enjoy exploring the plugins that are available within QGIS, and as you do, try and remember (or ask those that do remember) the times when undertaking many of these functions was either extremely convulated or were cost prohibitive.

Interested in all things Open Source GIS? Why not check out my BLOG: "Exploring Open Data" written in June 2016:

<https://www.cadlinecommunity.co.uk/hc/en-us/articles/208320689-Exploring-Open-Data>

