

Creating Heatmaps

QGIS Tutorials and Tips



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What are the two main types of spatial analysis? *cluster analysis* and *hotspot analysis*.



What year was the Surrey data collected?

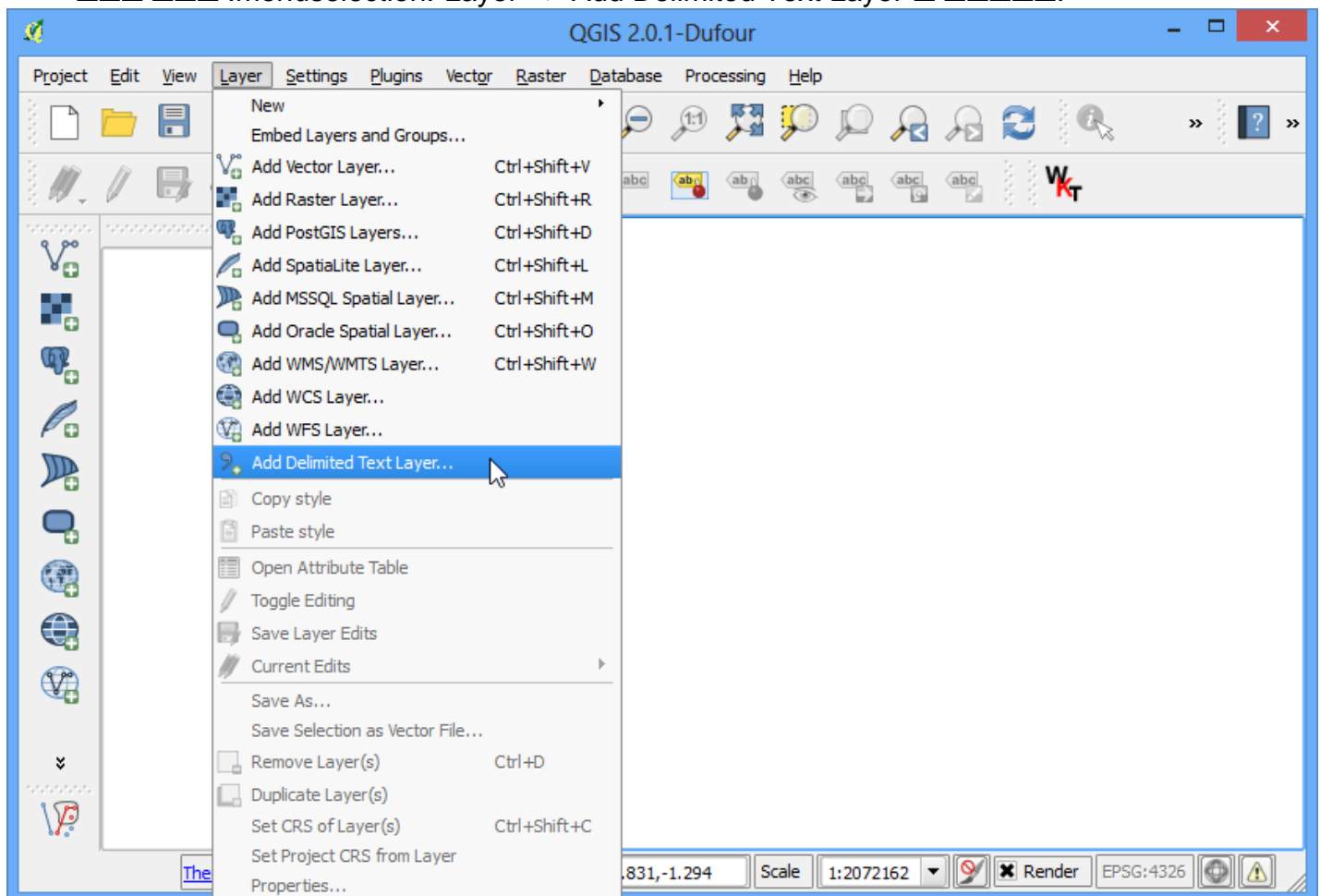


Where can you find the raw data from the Police.uk crime mapping website <<http://data.london.gov.uk/datastore/package/policeuk-crime-data>>?

Download the Surrey data.



- What are the steps to import a CSV file into QGIS?



2. `police-uk-crime-data-surrey.txt` `CSV (comma separated values)` `*Easting*` `*Northing*` `X` `Y` `Use spatial index` `OK`.

File Name: `C:/Users/ujaval/Downloads/police-uk-crime-data-surrey/police-uk-crime-data-surrey.txt` Browse...

Layer name: `police-uk-crime-data-surrey` Encoding: `UTF-8`

File format: ☒ `CSV (comma separated values)` ☐ Custom delimiters ☐ Regular expression delimiter

Record options: Number of header lines to discard: `0` ☒ First record has field names

Field options: ☐ Trim fields ☐ Discard empty fields ☐ Decimal separator is comma

Geometry definition: ☒ Point coordinates ☐ Well known text (WKT) ☐ No geometry (attribute only table)

X field: `Easting` Y field: `Northing` ☐ DMS coordinates

Layer settings: ☒ Use spatial index ☐ Use subset index ☐ Watch file

	ID	Month	Reported by	Falls within	Easting	Northing	Location	Crime type	Conte:
1	480097	2010-12	Surrey Police	Surrey Police	532773.00	156680.00	On or near Addison Road	Burglary	
2	480098	2010-12	Surrey Police	Surrey Police	498361.00	149806.00	On or near The Oval	Burglary	
3	480099	2010-12	Surrey Police	Surrey Police	498205.00	165251.00	On or near Albury Close	Burglary	
4	480100	2010-12	Surrey Police	Surrey Police	507437.00	174069.00	On or near Sanctuary Road	Burglary	
5	480101	2010-12	Surrey Police	Surrey Police	498205.00	165251.00	On or near Albury Close	Burglary	

OK Cancel Help

3. `Close`.



7. ■■■■■ ■■■■ ■■■■ `Heatmap`■■■■ ■■■ ■■■■■■ ■■■■■■. ■■■■ ■■■■■■ ■■■■■■■■ ■■■■
:doc:`using_plugins`■ ■■■■■. ■■■ ■■■■■■ ■■■■■■■■ ■■ ■■■■ --> ■■■■■ --> ■■■■■
:menuselection:`Raster --> Heatmap --> Heatmap`■ ■■■■■.



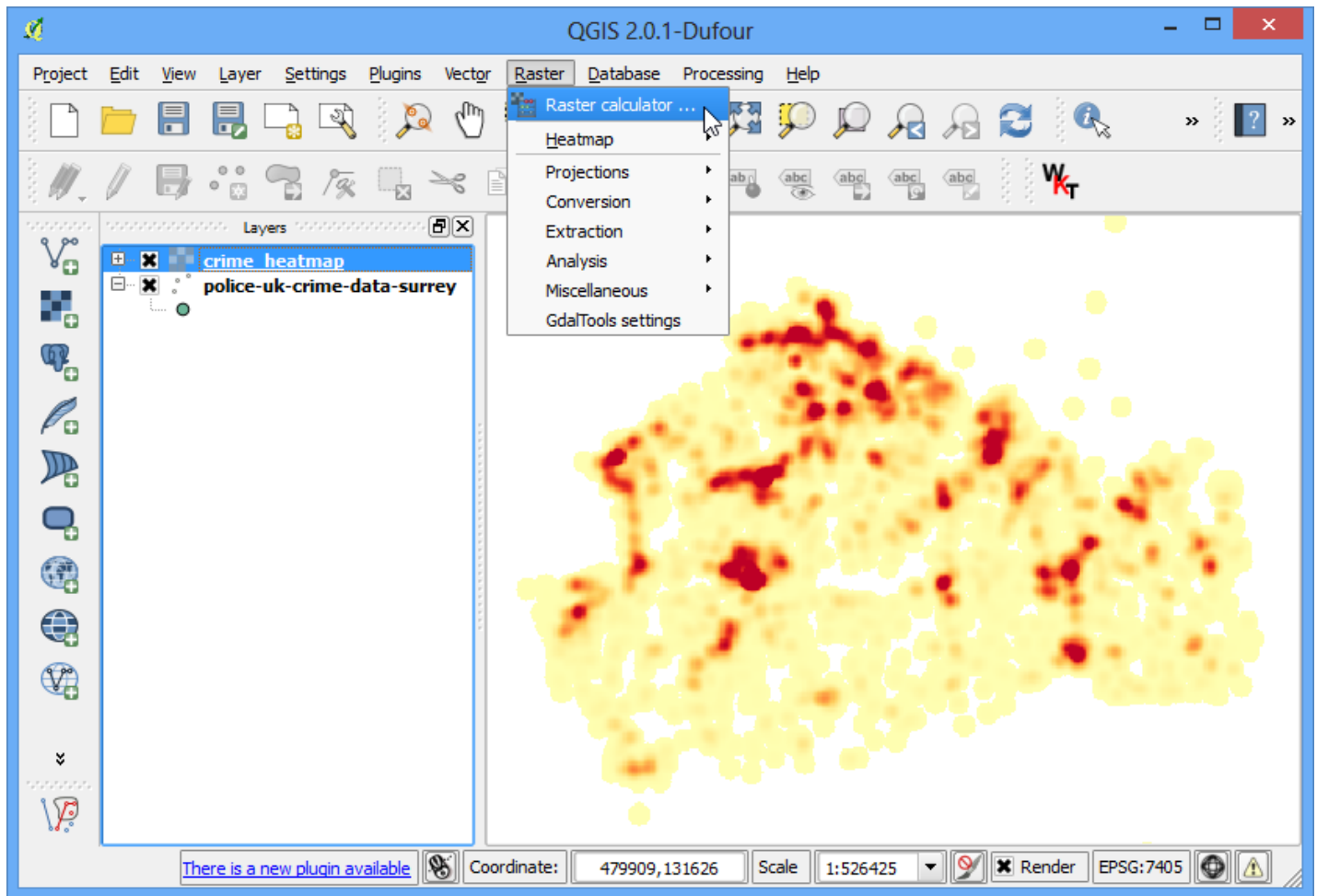
8. `Heatmap Plugin` `Output raster` `sms` `crime_heatmap` `Radius` `1000` `heat` `Advanced` `Cell Size X` `Cell Size Y` `100` `OK`



10. `guiabel: Properties`



11. `Style` `Render type` `Singleband pseudocolor`. `Load min/max values` `Accuracy` `Actual (slower)` `Load` `Generate new color map` `YlOrRd` (Yellow-Orange-Red) `Classify` `OK`.



14. `processing.run("rastercalculator", [{"name": "crime_hotspots", "value": "crime_heatmap@1", "expression": "\"crime_heatmap@1\" > 5", "add_to_project": true}], {"MSG": "OK"})`



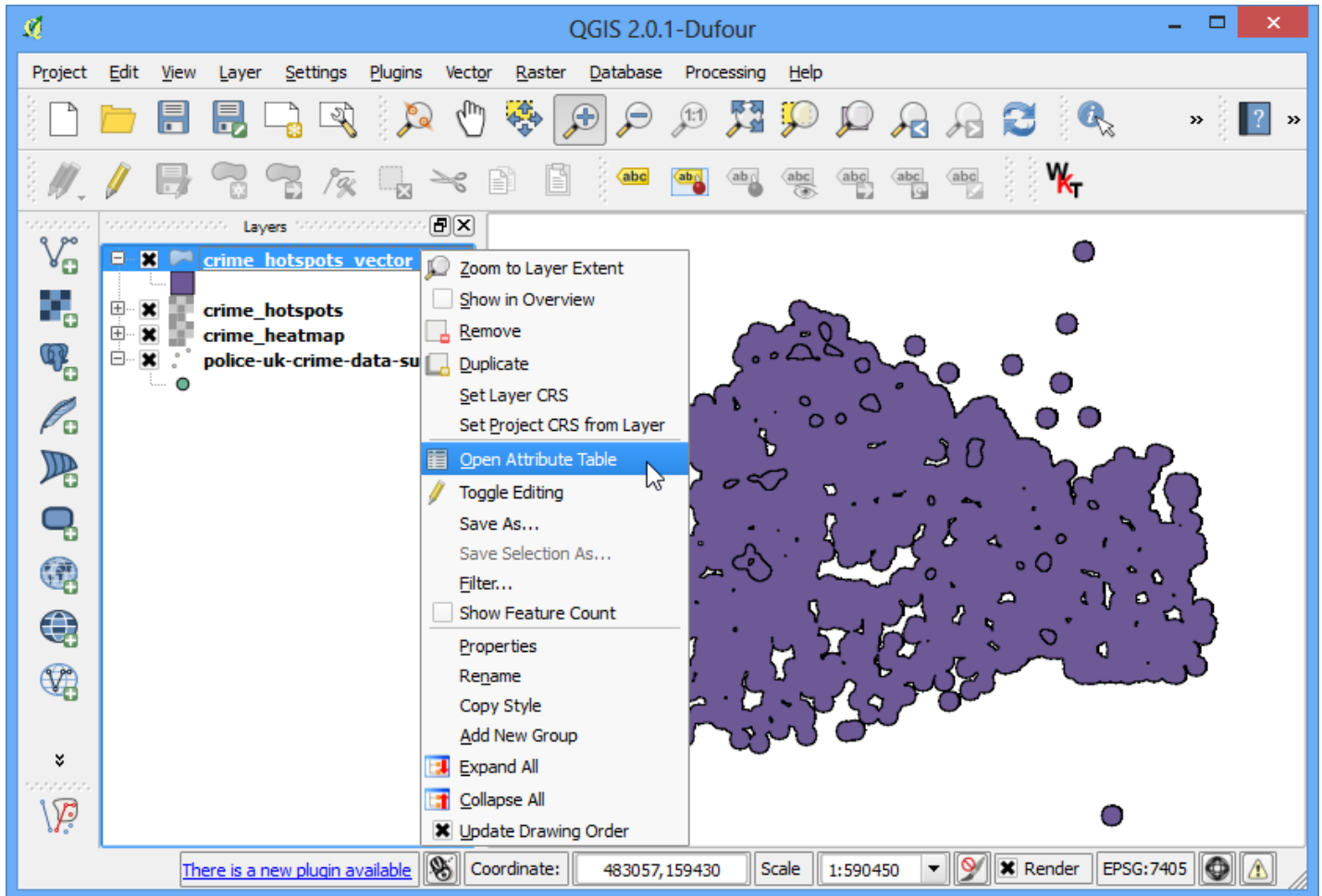
15. QGIS ■■■■ ■■■■ ■■■■ ■■■■. ■■■■ ■■■■ 0 ■■ 1 ■■ ■■■■. ■■■■ 5 ■■ ■■■■ ■■■■ 1 ■■ ■■ ■■■■ 0 ■■■■. ■■ ■■■■ --> ■■ --> ■■■■ /■■■■ ■■■■ :menuselection: `Raster --> Conversion --> Polygonize (Raster to Vector)` ■■■■.



16. `crime_hotspots_vector` `:guilabel:Field name` `:guilabel:Load into canvas when finished` `:guilabel:OK`



17. ■■■ ■■■■ ■■■■ ■■■■ ■■■■ QGIS ■■■■ ■■■■. ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■. ■■■■ ■■■■ 0 ■■■■ 1 ■■■■ ■■■■ ■■■■ ■■■■ ■■■■. 0 ■■■■ ■■■■ ■■■■ ■■■■. ■■■■ ■■■■ ■■■■ ■■■■. ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ :guilabel:`Open Attribute Table` ■■■■ ■■■■.



18. ■■■ ■■■■ :guilabel:`Attribute table` ■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ :guilabel:`Select feature using an expression` ■■■ ■■■■.



19. `DN = 1` `Select` `Close`



20. QGIS **Save Selection As...** dialog box. The **Save Selection As...** dialog box is used to save the current selection as a new layer. The dialog box has a **Save Selection As...** button and a **Close** button.



21. `crime_clusters` :guilabel: `Add saved file to map` :guilabel: `OK`



22. ■■■■■■■■. ■■ ■■■■ ■■■■■■ ■■■■ `hotspots` ■■■■ ■■■■. ■ ■■■■■■ ■■■■■■
 ■■■■ *intelligence* ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■.

