

# Creating Heatmaps

QGIS Tutorials and Tips



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Translations by

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



What is the name of the 2011 census data for Surrey?

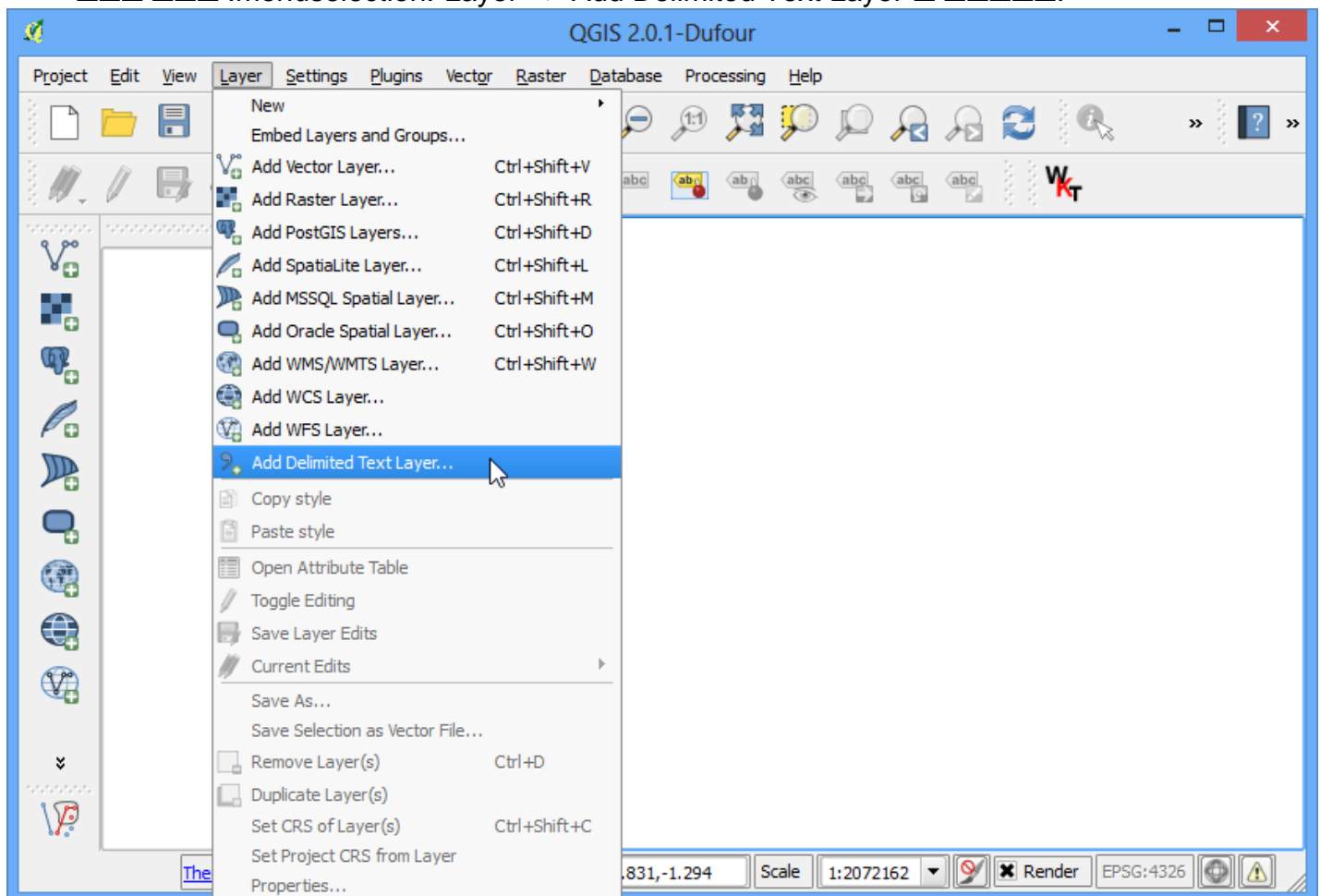


Where can you find raw data from the Police.uk crime mapping website <<http://data.london.gov.uk/datastore/package/policeuk-crime-data>>?

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)

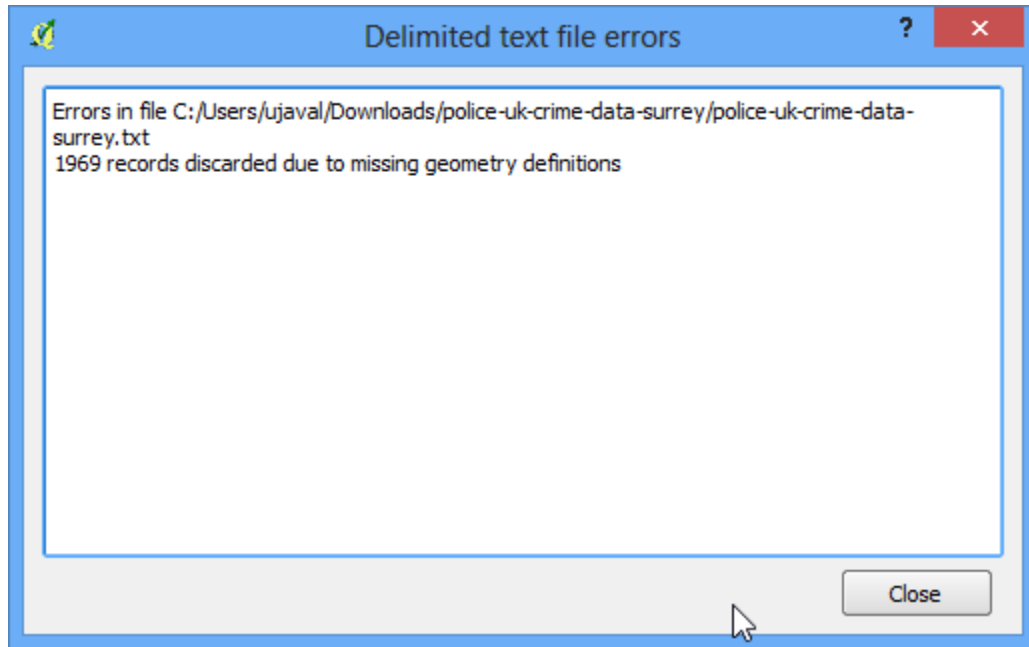
X field: `Easting` Y field: `Northing` ☐ DMS coordinates

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

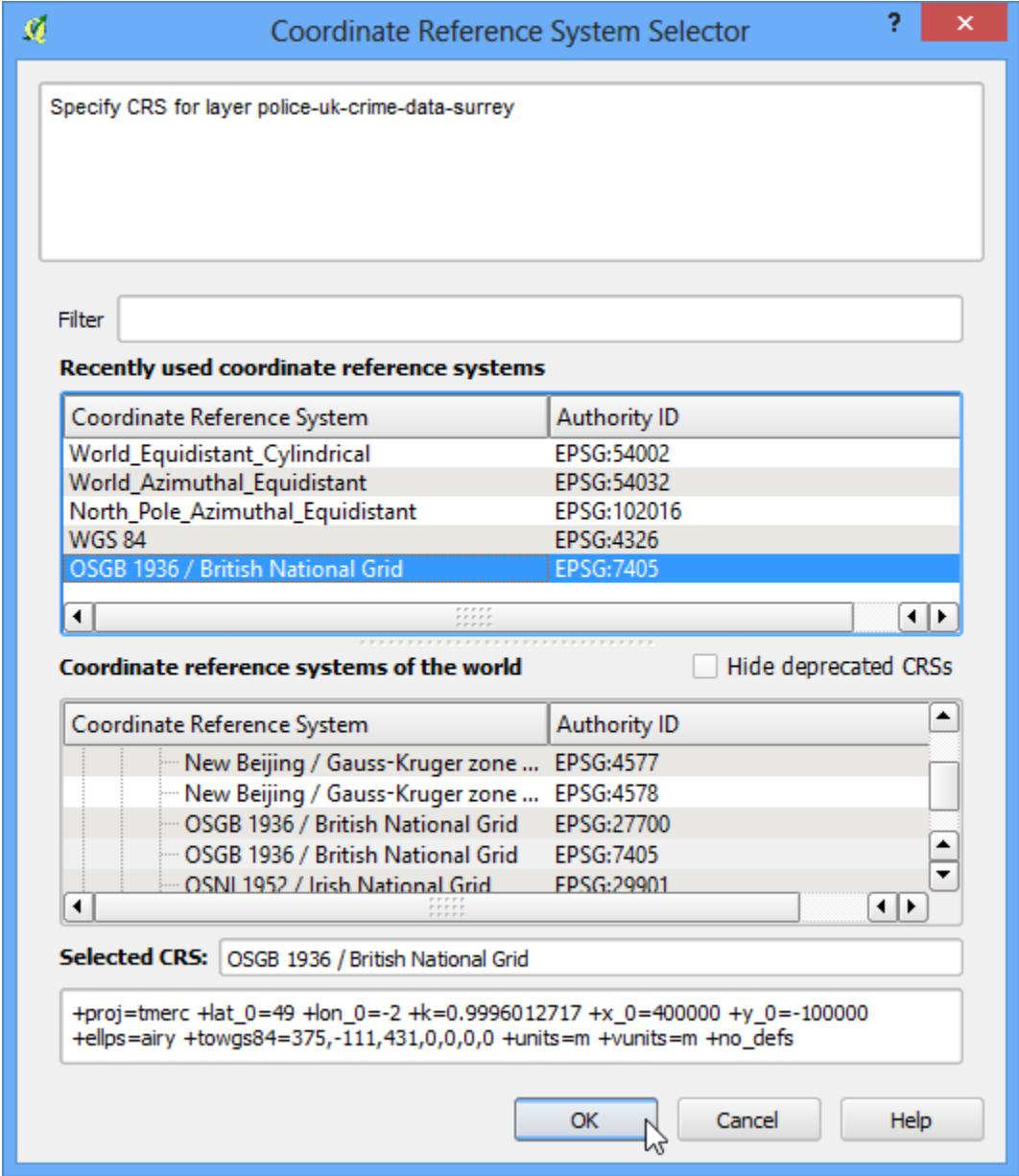
	ID	Month	Reported by	Falls within	Easting	Northing	Location	Crime type	Conte:
1	480097	2010-12	Surrey Police	Surrey Police	532773.00	156680.00	On or near Addison Road	Burglary	
2	480098	2010-12	Surrey Police	Surrey Police	498361.00	149806.00	On or near The Oval	Burglary	
3	480099	2010-12	Surrey Police	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

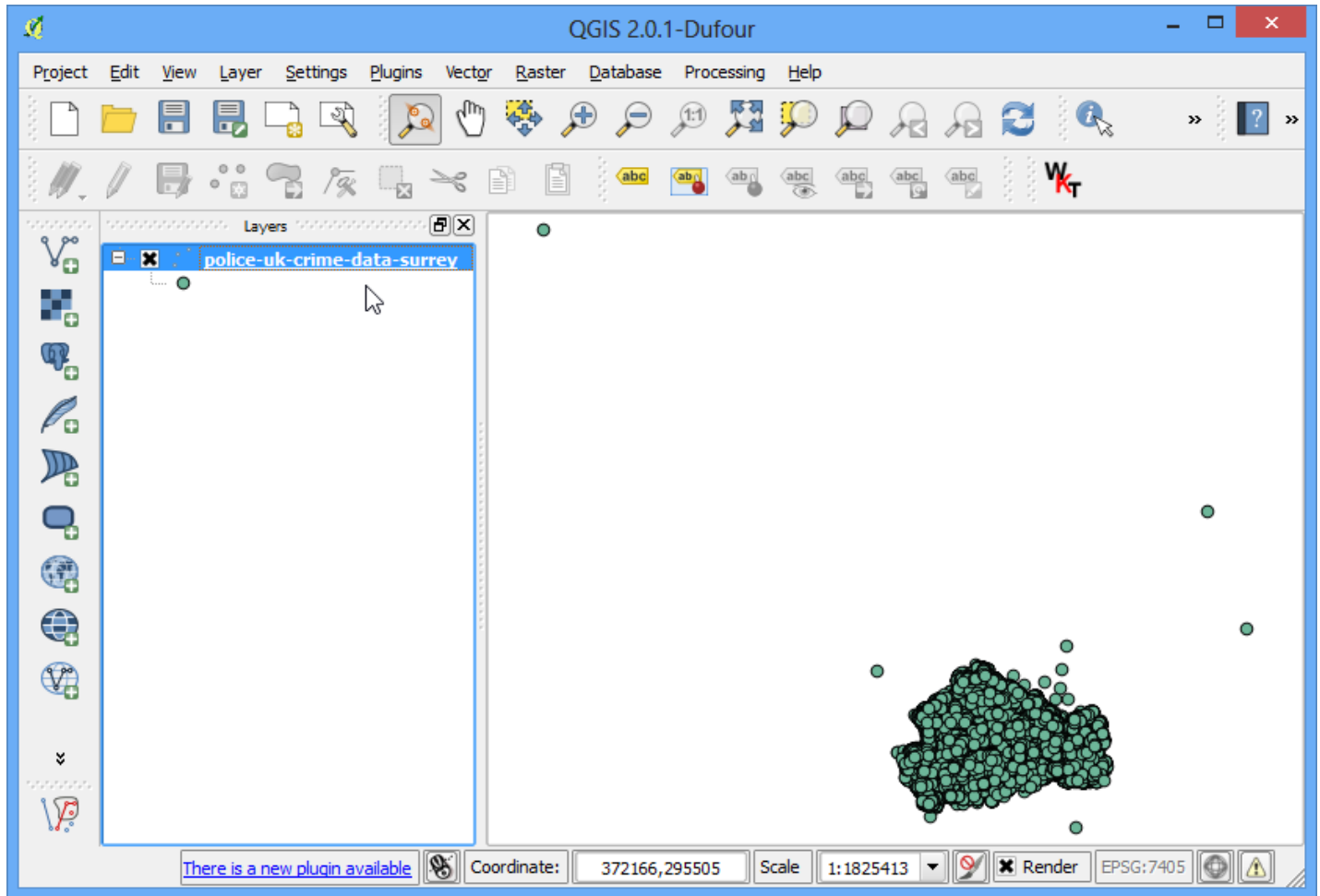
3. `Close`.



4.  ,  `Coordinate Reference System (CRS)`  .        
   *British National Grid*    . CRS : OSGB 1936 / British  
National Grid`  . : OK` .



5. ■■ QGIS ■■■■ ■■■■■■ ■■ ■■■■.

[illegible]



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``

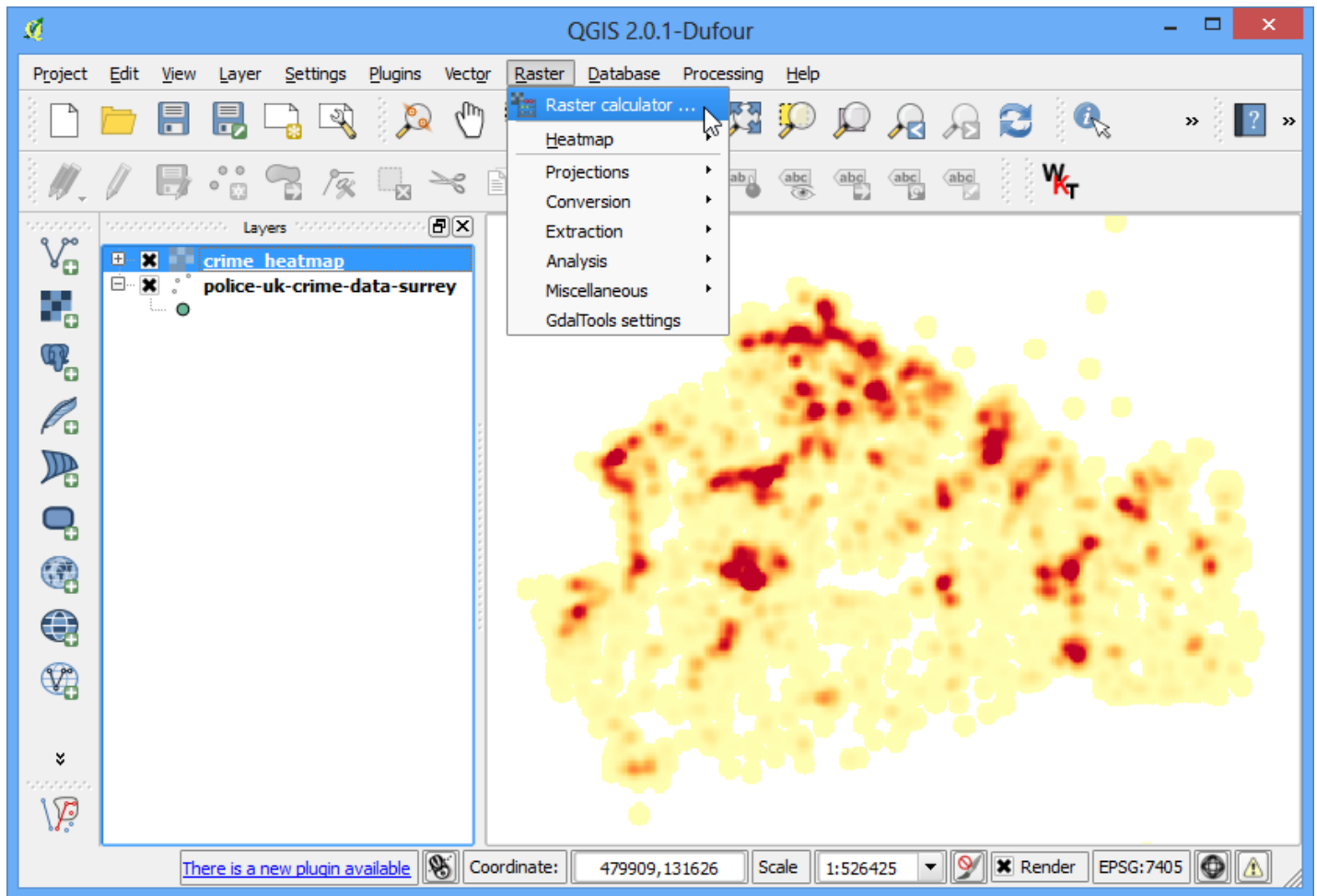


11. `Style` `:guilabel:Render type` `:guilabel:Singleband pseudocolor` `:guilabel:Load min/max values` `:guilabel:Accuracy` `:guilabel:Actual (slower)` `:guilabel:Load` `:guilabel:Generate new color map` `:guilabel:YlOrRd` (Yellow-Orange-Red) `:guilabel:Classify` `:guilabel:OK`



12. `guiLabel: 'Identify'` `(1000m)`





14. `Raster calculator`
 :guilabel:`Raster bands`
 :guilabel:`crime_hotspots`
 :guilabel:`crime_heatmap@1`
 Raster calculator expression
 "crime_heatmap@1" > 5
 :guilabel:`Add result to project`
 :guilabel:`OK``



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

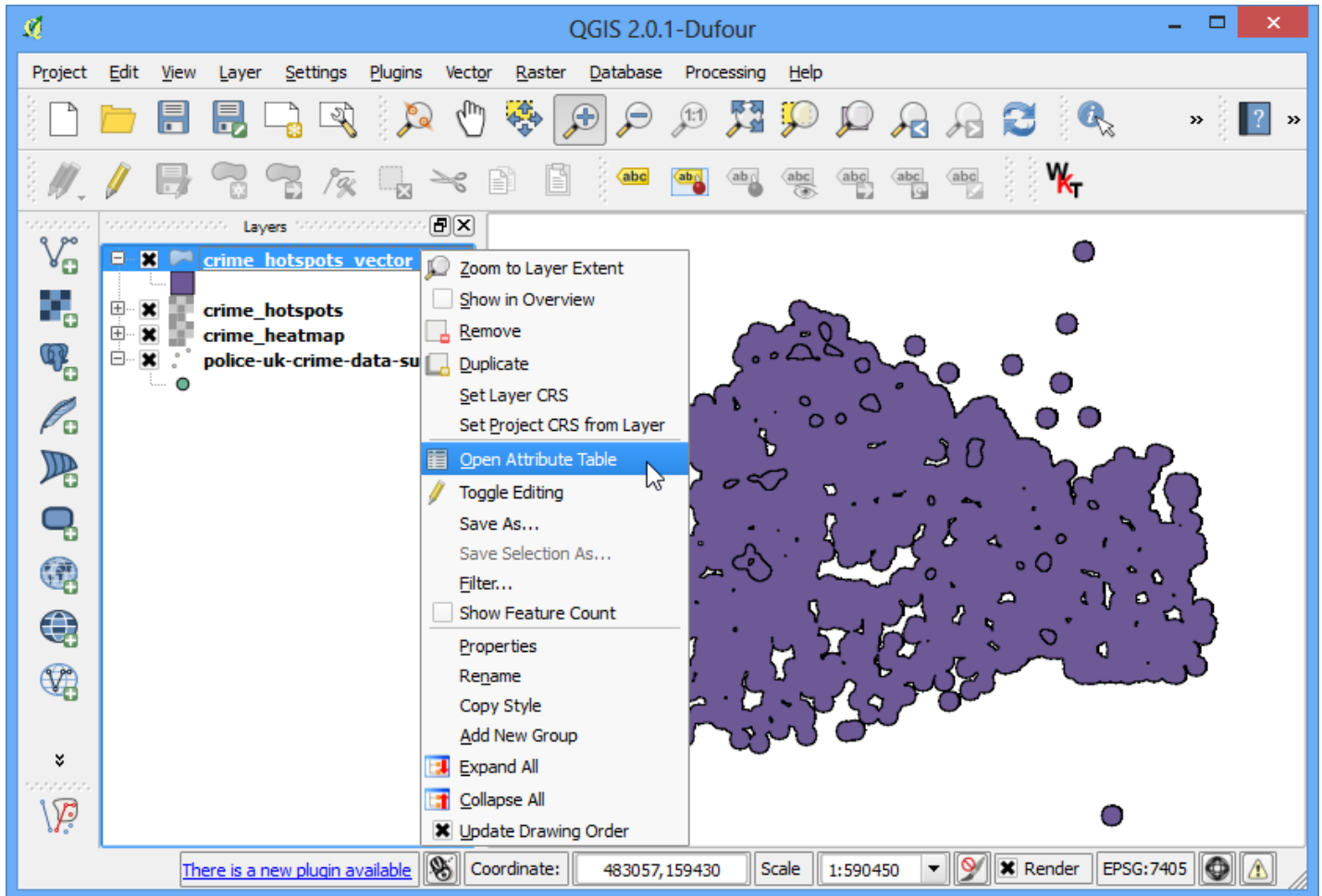


16. `crime_hotspots_vector` `:guilabel:Field name` `:guilabel:Load into canvas when finished` `:guilabel:OK`





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



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



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



20. QGIS **Save Selection As...** dialog box. The **Save Selection As...** dialog box is used to save the selected features as a new layer. The dialog box has several options, including the ability to save the selection as a shapefile, a geodatabase, or a table. The **Save Selection As...** dialog box is shown in the image below.



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



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

