

# Creating Heatmaps

## QGIS Tutorials and Tips



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cluster analysis and hotspot analysis.



2011 Surrey

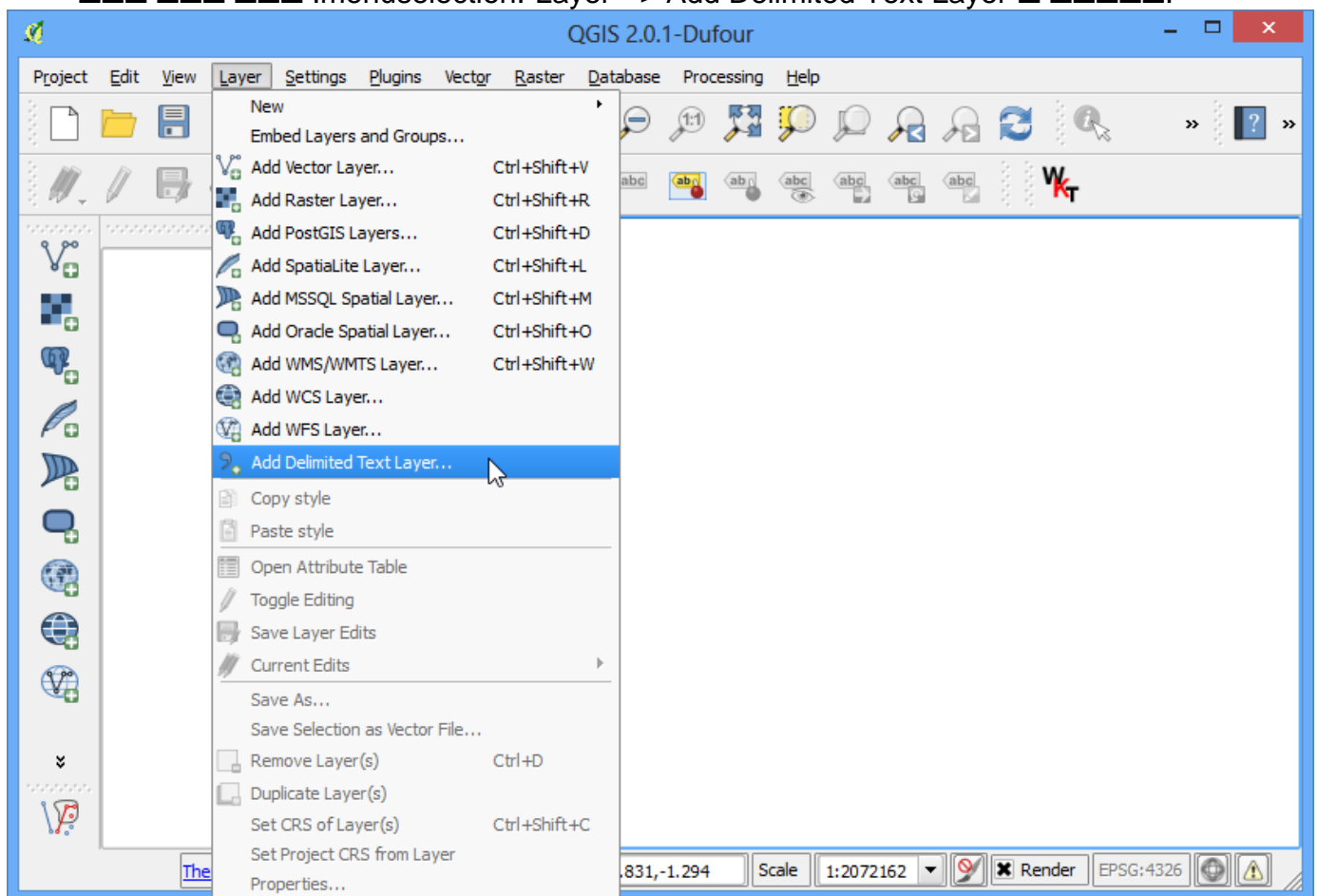


raw data from the Police.uk crime mapping website <<http://data.london.gov.uk/datastore/package/policeuk-crime-data>>

Download the Surrey data.



1. CSV QGIS



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

**Create a Layer from a Delimited Text File**

File Name:

Layer name:  Encoding:

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

Record options: Number of header lines to discard:  ☒ 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:  Y field:  ☐ 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	

3. `guiLabel: 'Close'`

**Delimited text file errors**

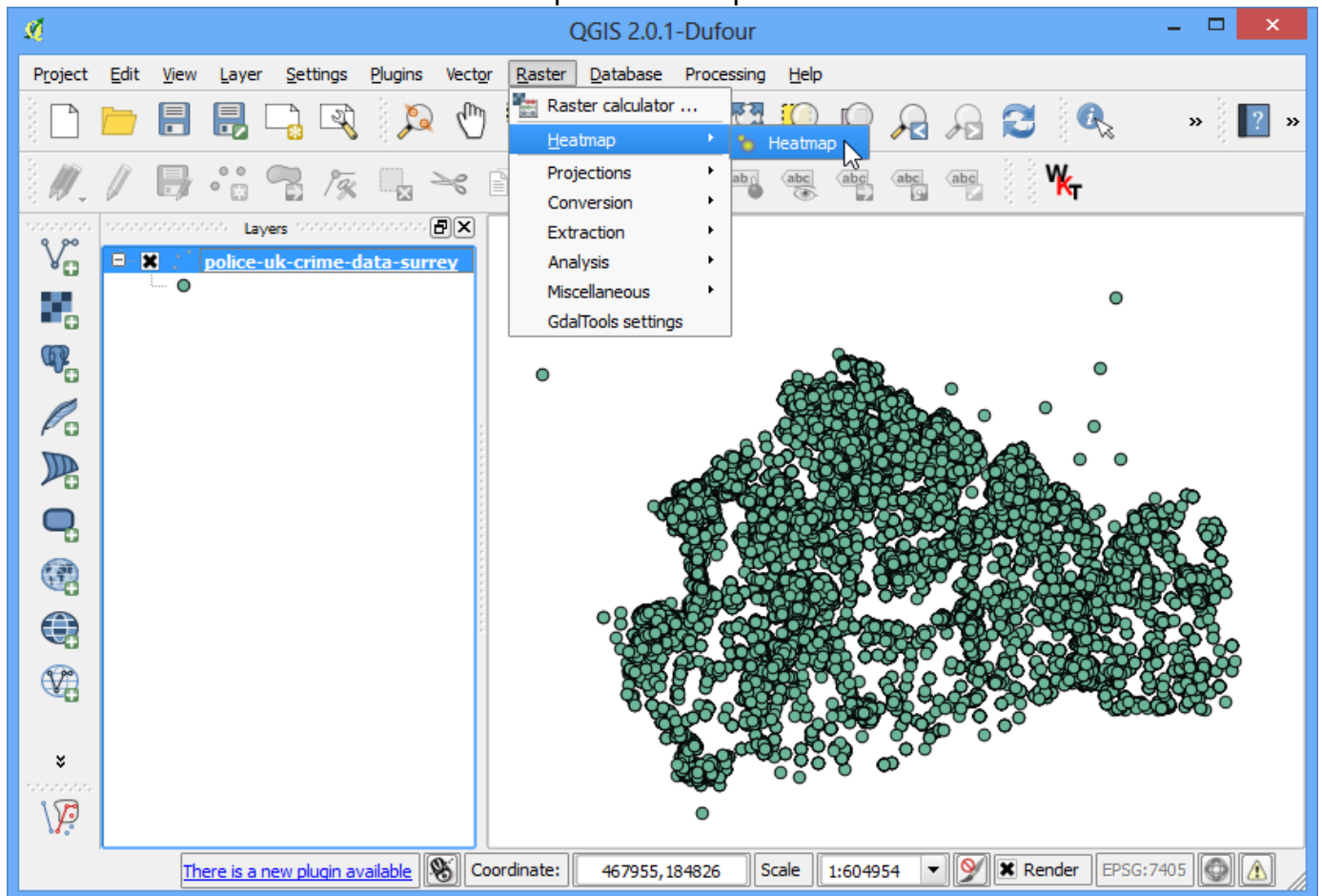
Errors in file C:/Users/ujaaval/Downloads/police-uk-crime-data-surrey/police-uk-crime-data-surrey.txt  
1969 records discarded due to missing geometry definitions

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





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

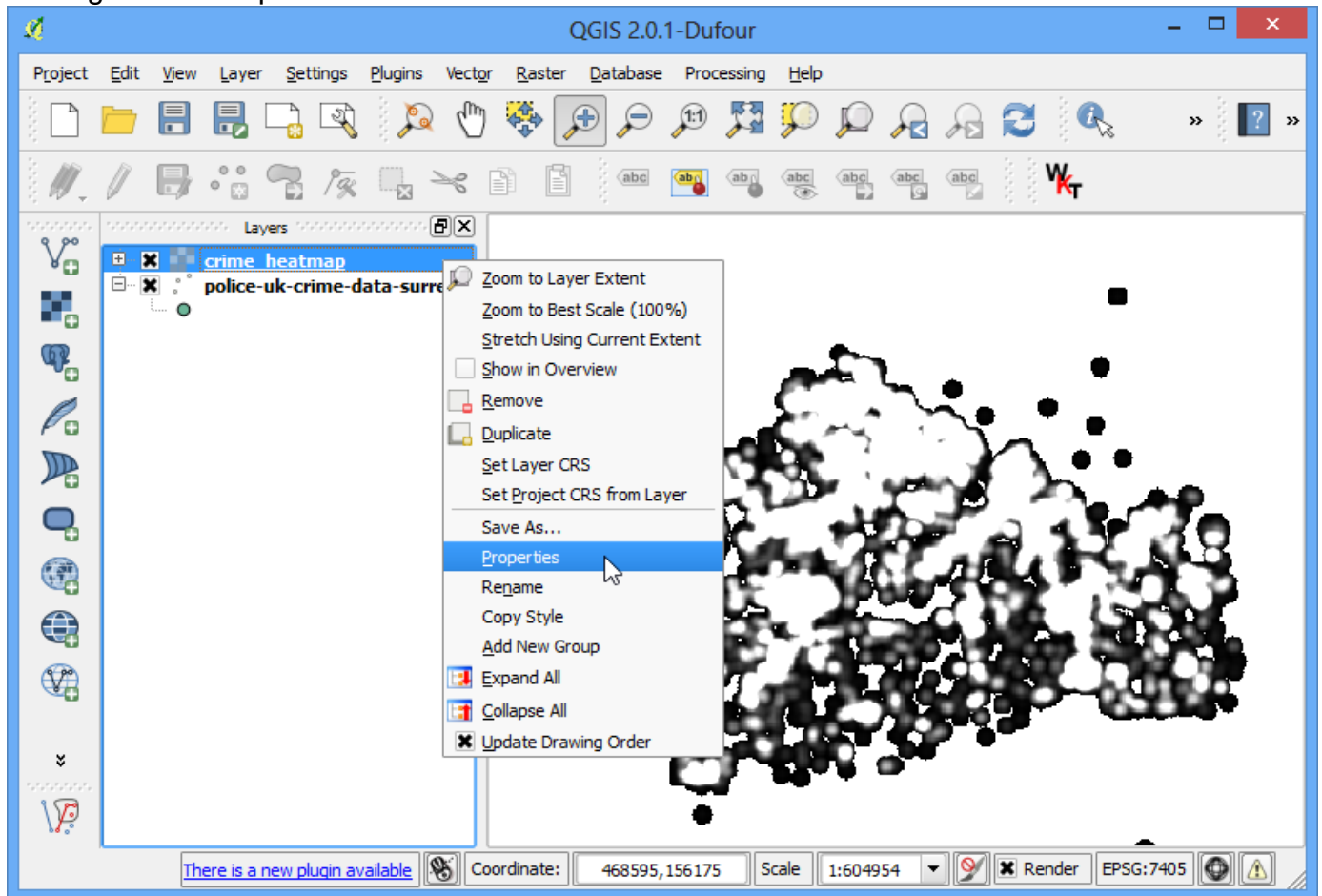


8. `Heatmap Plugin`. `Output raster` `crime_heatmap`. `Radius` `1000`. `Advanced` `Cell Size X` `Cell Size Y` `100`. `OK`.





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``



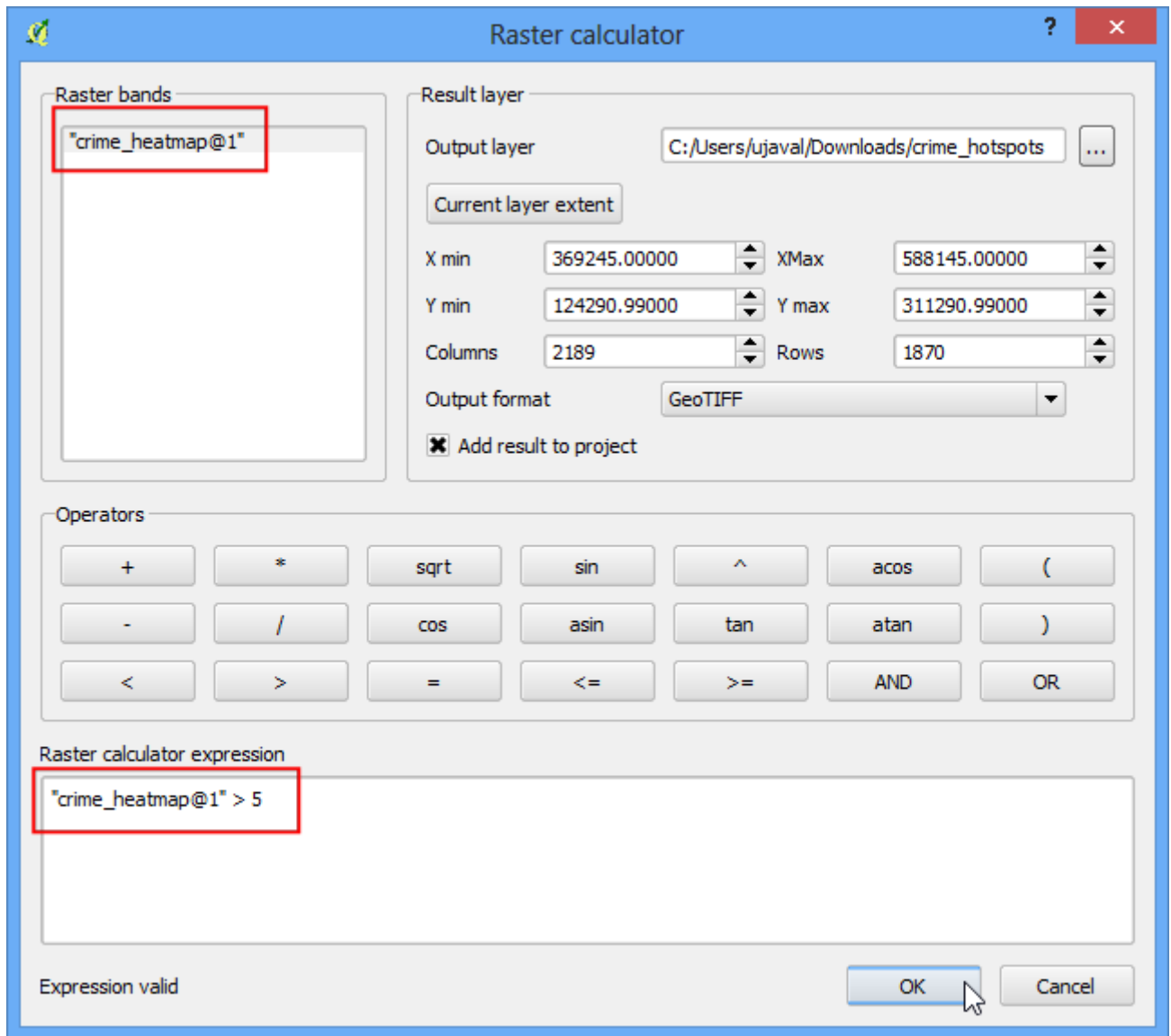




13. ■■■ ■■■■■ ■■■■■■■■■■. ■■■■ ■■■■ ■■■■ ■■■■■■■■. ■■■■ ■■■■ ■■■■ ■■■■■■■■■■ ■■■■ ■■■■. ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ *hotspots* ■■■■■■■■■■. ■■■■ ■■■■ ■■■■ *hotspots* ■■■■■■■■■■. ■■■■ ■■■■ --> ■■■■ ■■■■ :menuselection: `Raster --> Raster Calculator` ■■■■ ■■■■.



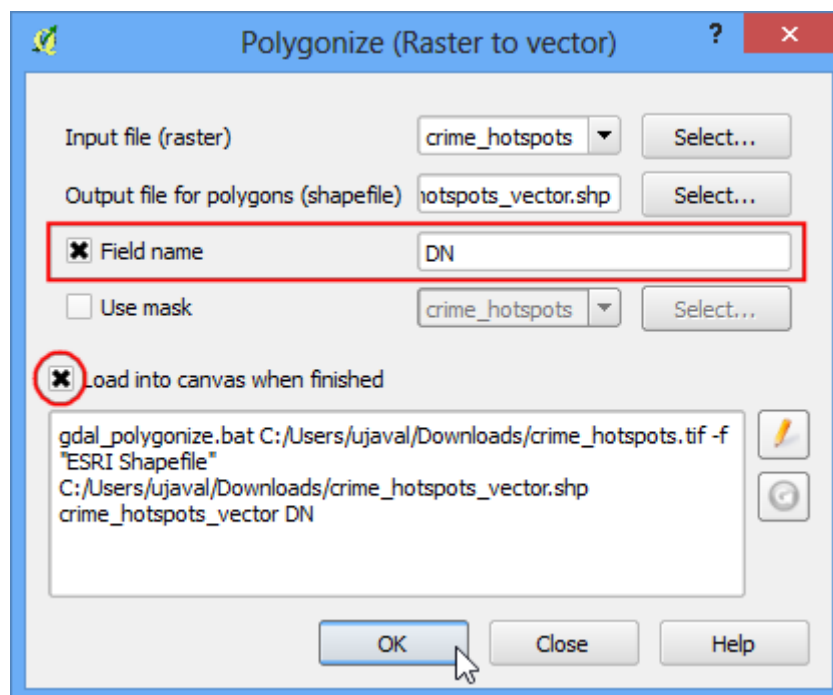
- ```
14. #####
#####
##### Raster calculator`##### `crime_hotspots`#####
#####. ##### :guilabel:`Raster bands`##### :guilabel:`crime_heatmap@1`#####
##### Raster calculator expression #####
"crime_heatmap@1" > 5`#####. ##### :guilabel:`Add result to
project`##### :guilabel:`OK`#####.
```



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



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



17. `QGIS` `:` `Open Attribute Table`



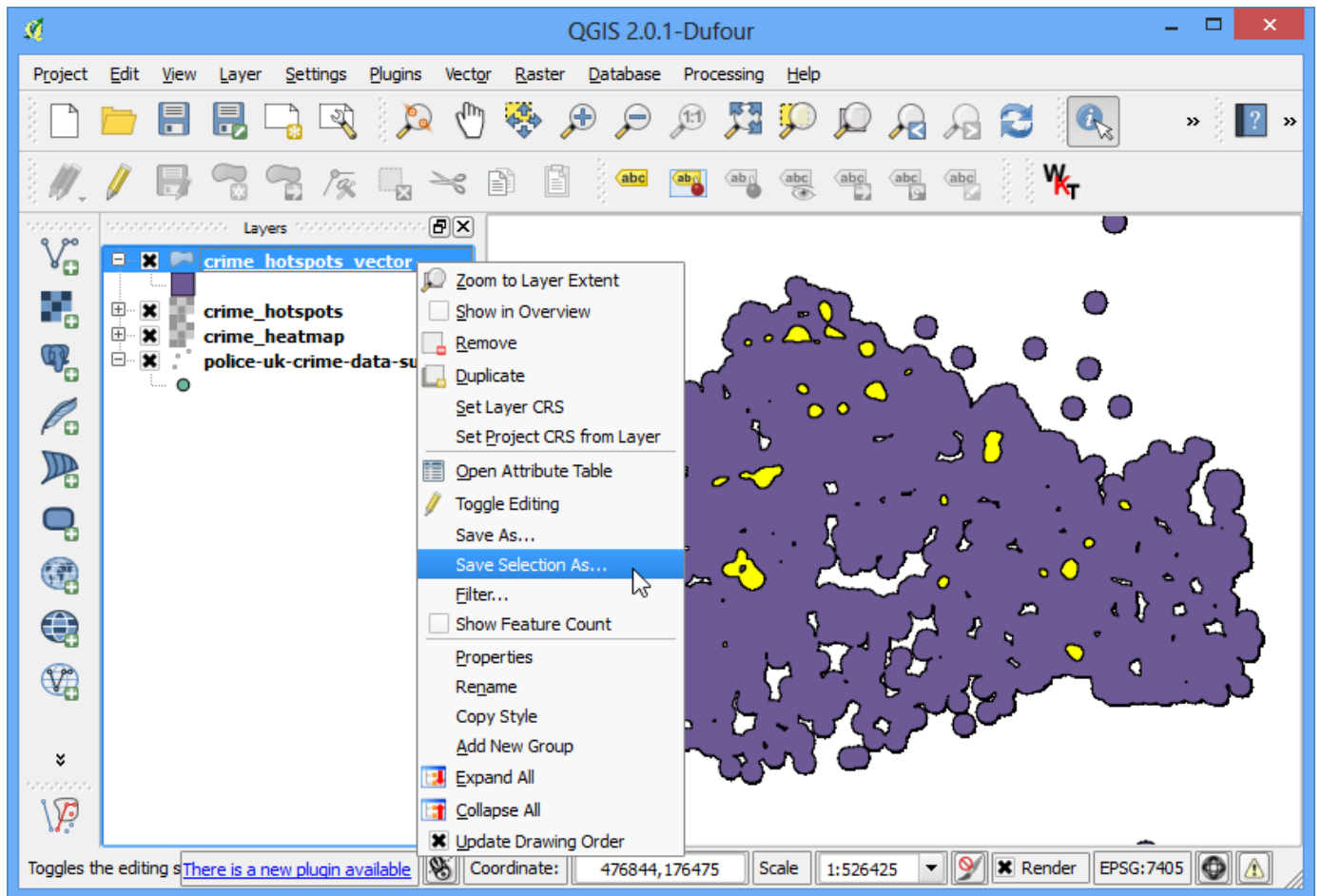
18. ■■■ ■■■■ :guilabel:`Attribute table` ■■■ ■■■■ ■■■ ■■■ ■■■ :guilabel:`Select feature using an expression` ■■■■■■■■.







20. QGIS 中的“选择表达式”对话框。在“函数列表”中，选择“字段和值”，然后选择“DN”。在“表达式”框中输入“"DN" = 1”。在“输出预览”中，显示 0 个要素。单击“选择”按钮（黄色高亮图标）或“关闭”按钮。



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



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