Classify Tool

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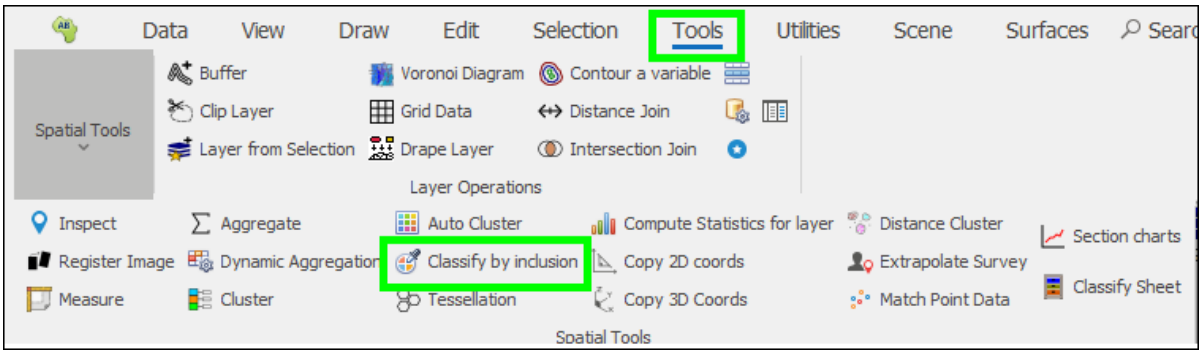
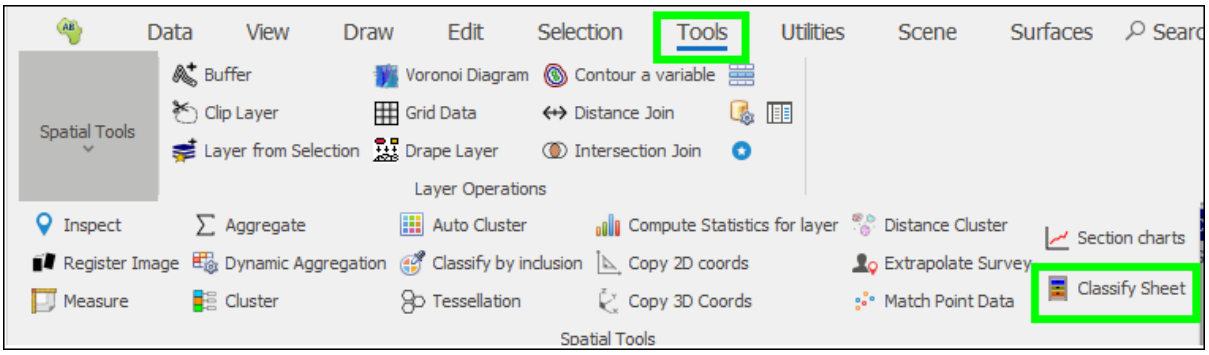
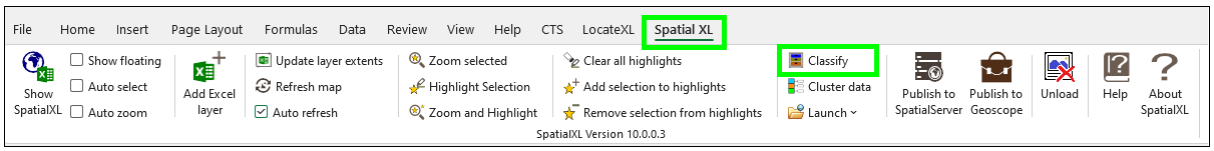
The **Classify** tool allows you to do a spatial join and assign columns from an area layer to a layer with geographic coordinates such as points. These columns are assigned based on the point layer's intersection with the area layer in space.

The tool has two forms in our spatial products. The first is the **Classify by Inclusion** tool which will do the operation for you within a layer in the product itself. The second is the **Classify Sheet** tool which does the operation to an Excel sheet, this tool is only available in SpatialXL:

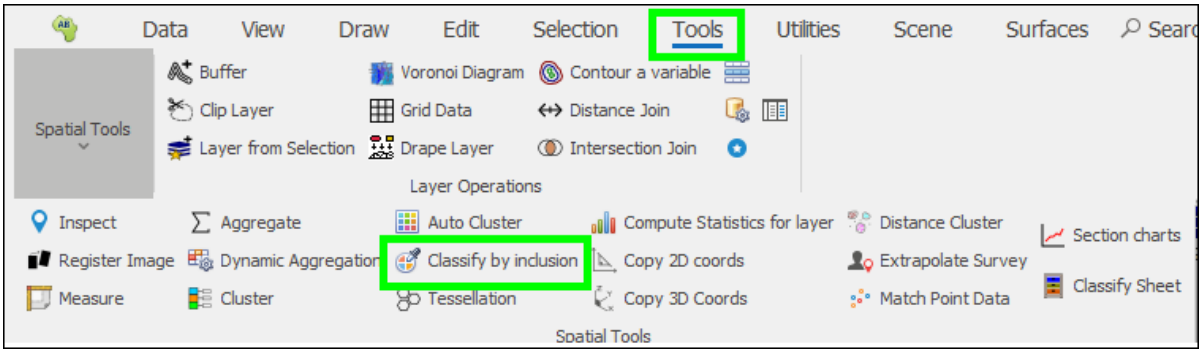


The **Classify Sheet** tool can be accessed in the Tools tab in SpatialXL or the SpatialXL Ribbon in Excel:

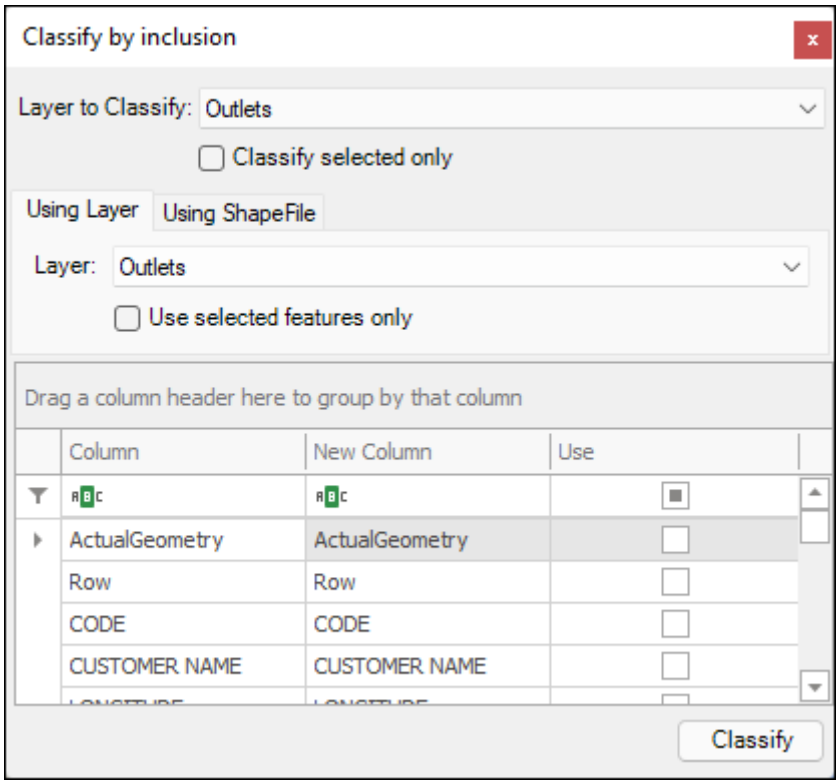




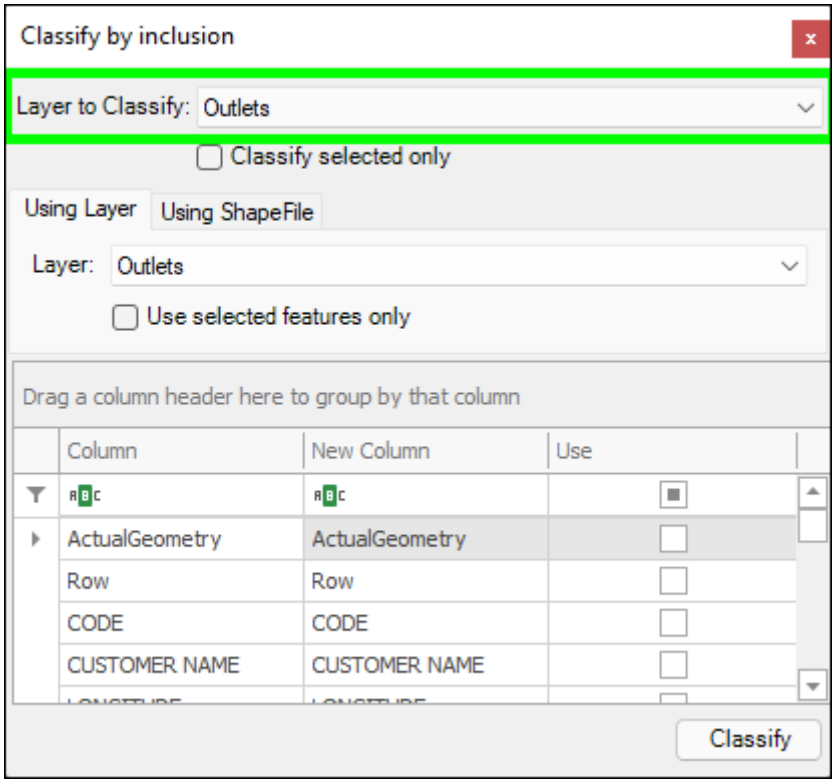
Classify by Inclusion

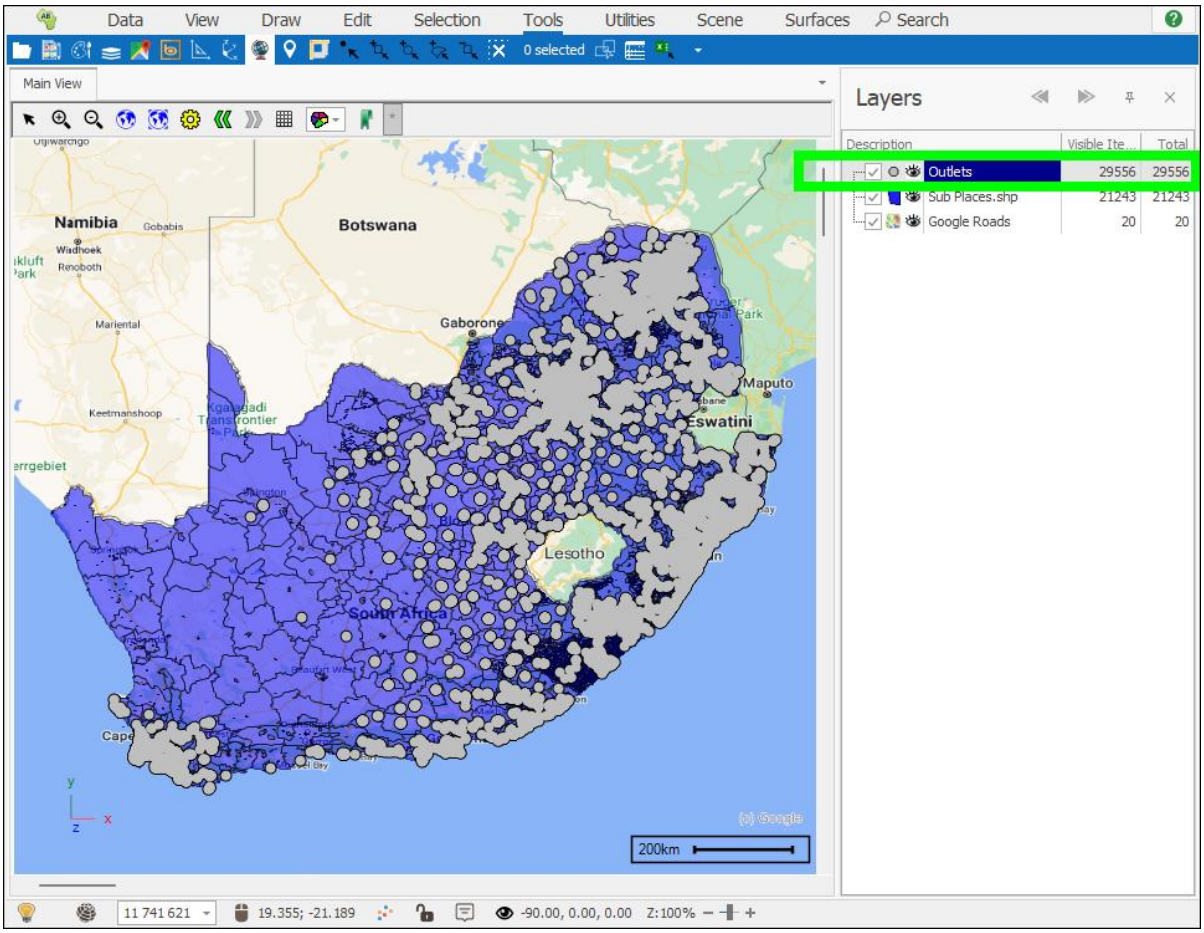


Clicking on the tool brings up the following dialogue:

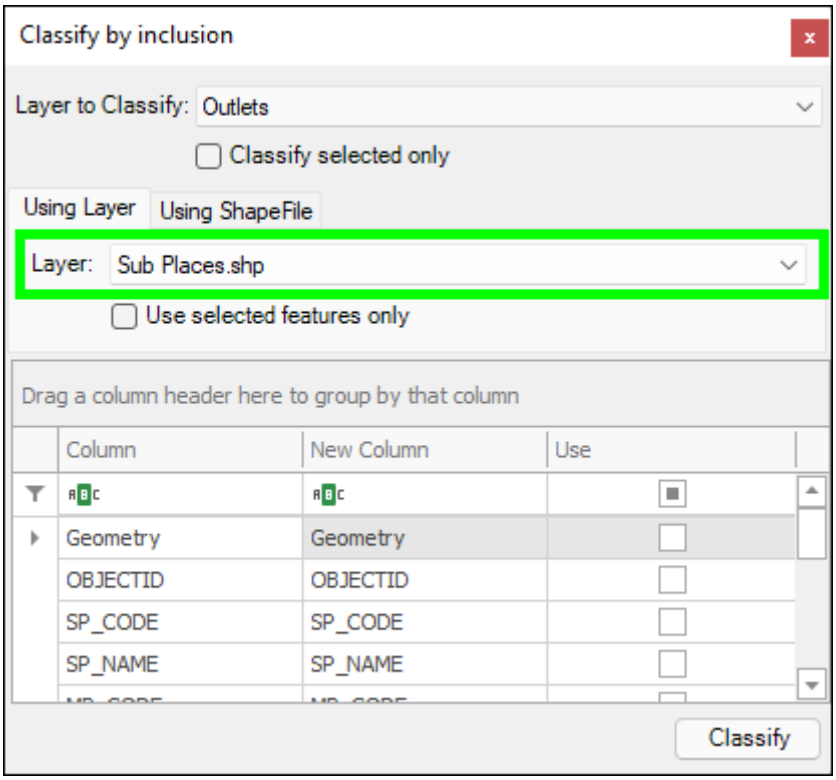


First, choose the layer you want to classify, this will be the point layer; in this example I have an **Outlets** layer which I want to classify:

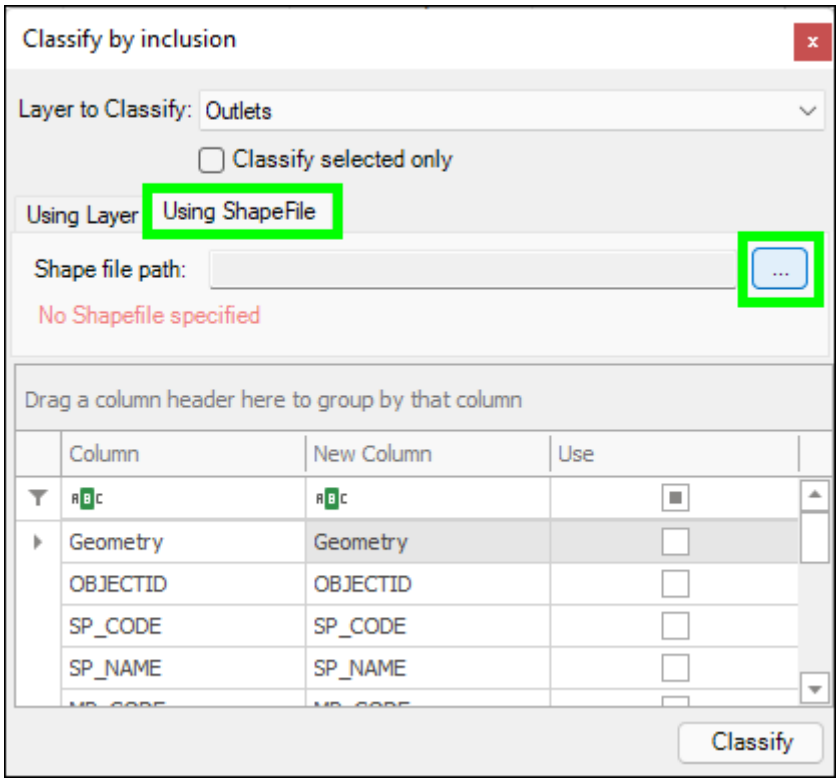




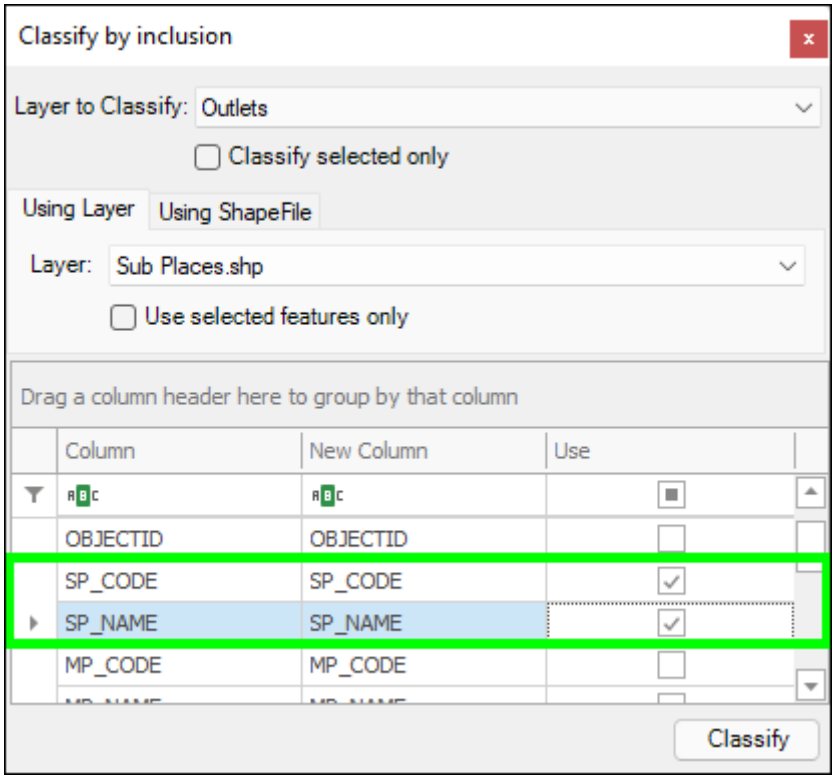
Then in the **Using Layer** tab below choose the layer you will use to classify and assign columns; this will be the area layer; in this example I have a **Sub Places** layer which I'm using to classify:



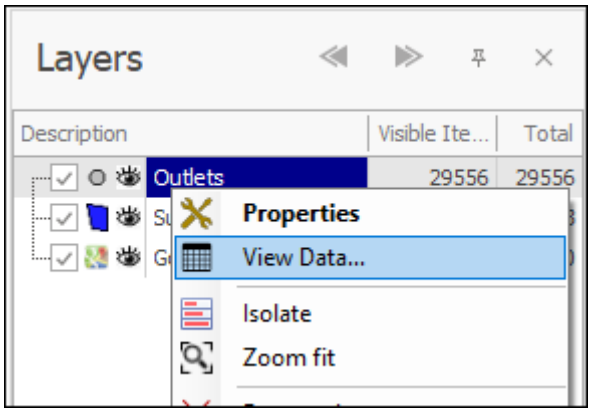
You can also browse to a shapefile, that you have not brought in as a layer, to use for the classification in the **Using Shapefile** tab:

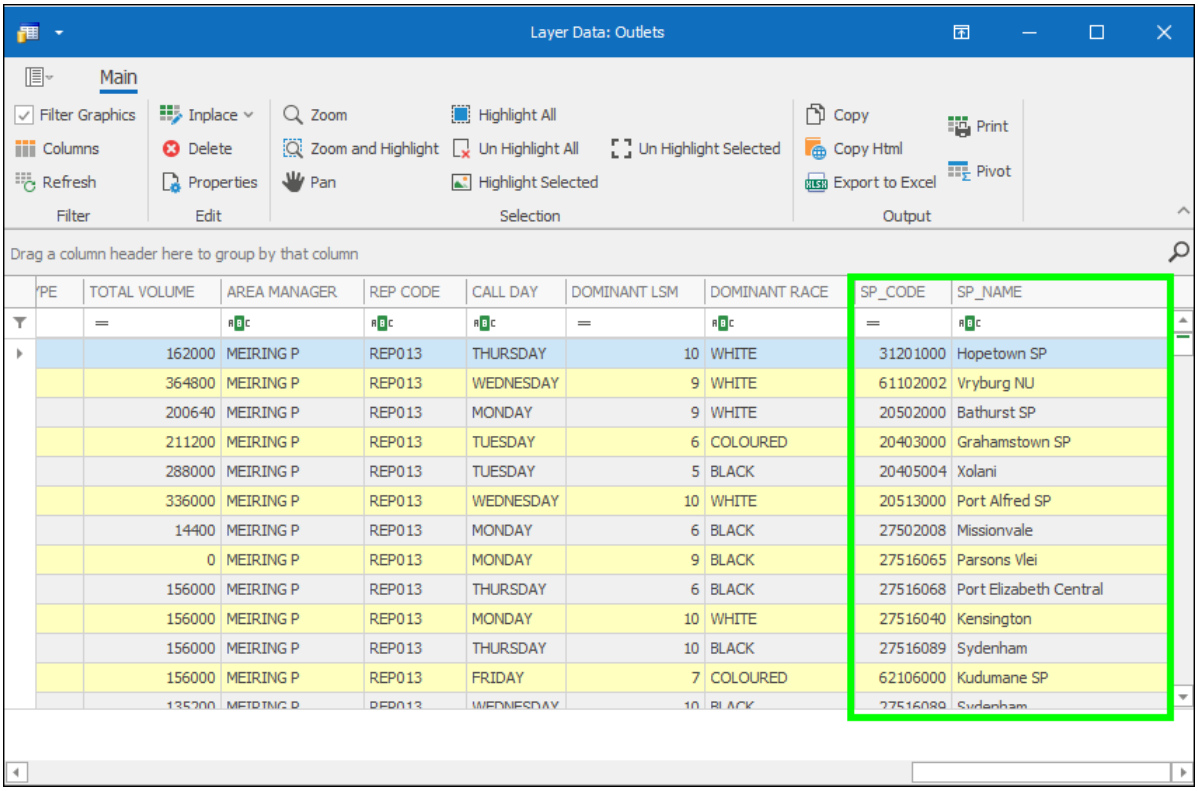


Then in the grid below, choose the columns from the area layer that you want assigned to the target point layer by ticking them on under **Use**. Under **New Column** is the name the column will have when it is added to the target layer, you can change this if you want. In this example, the columns I want assigned are the **SP CODE** and **SP NAME**, which will give the Sub Place code and name of the Sub Place my outlets fall in:

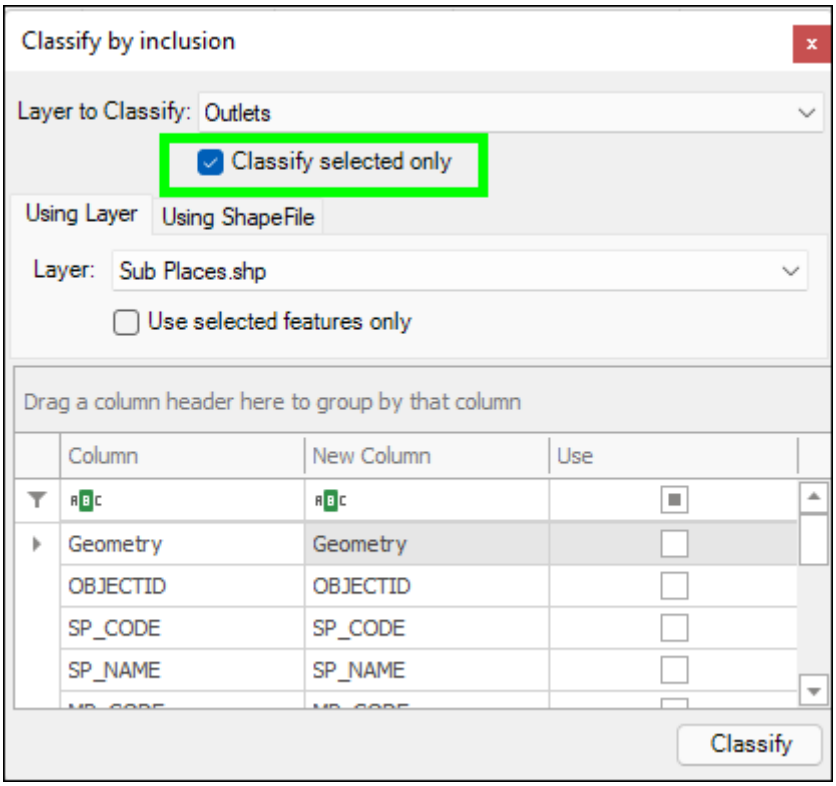


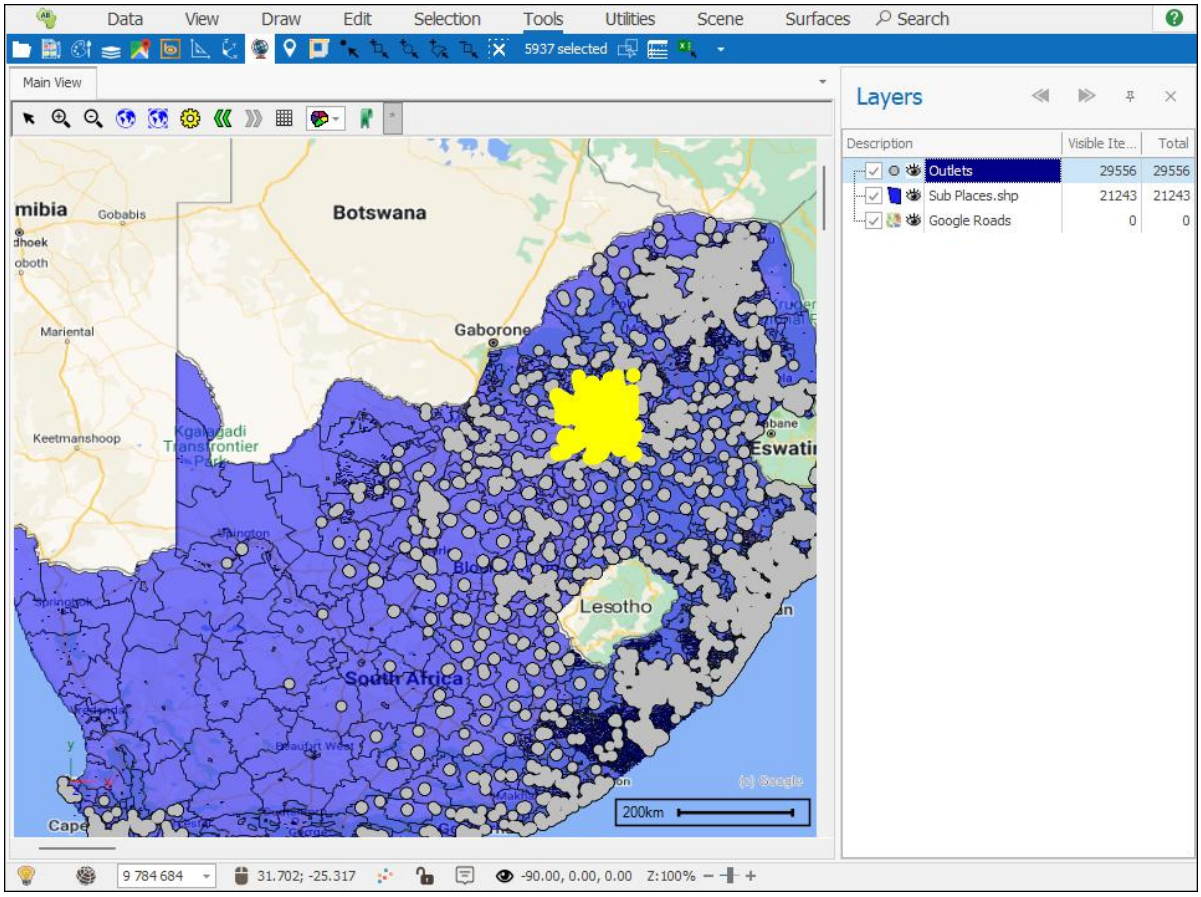
When done click **Classify**. Your target layer has now been classified, to see the result right click and **View Data** to open the Layer Data Grid, you will then see the columns assigned to the points:



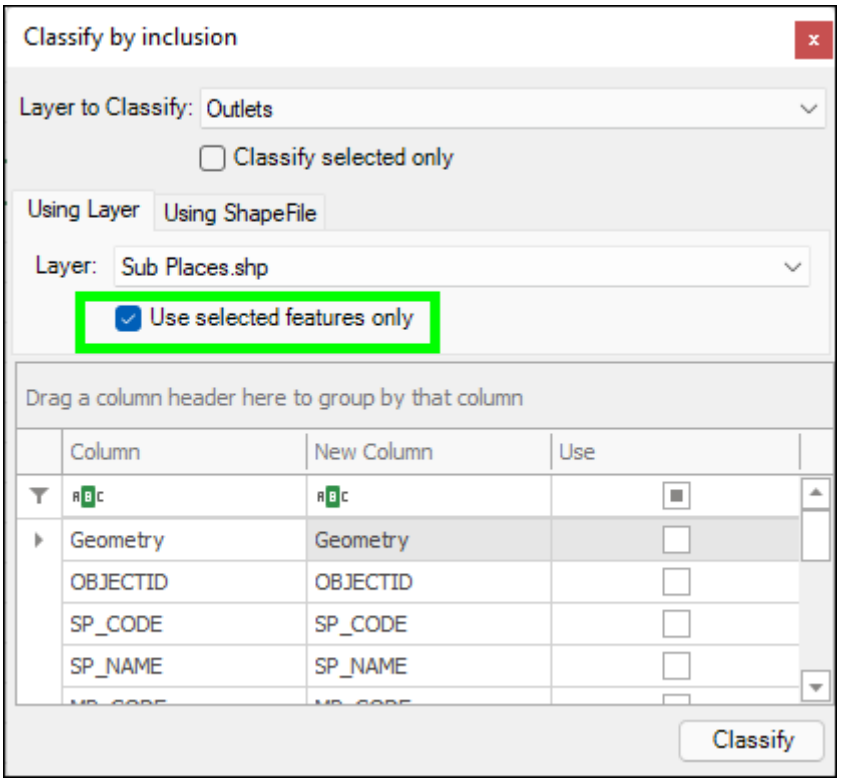


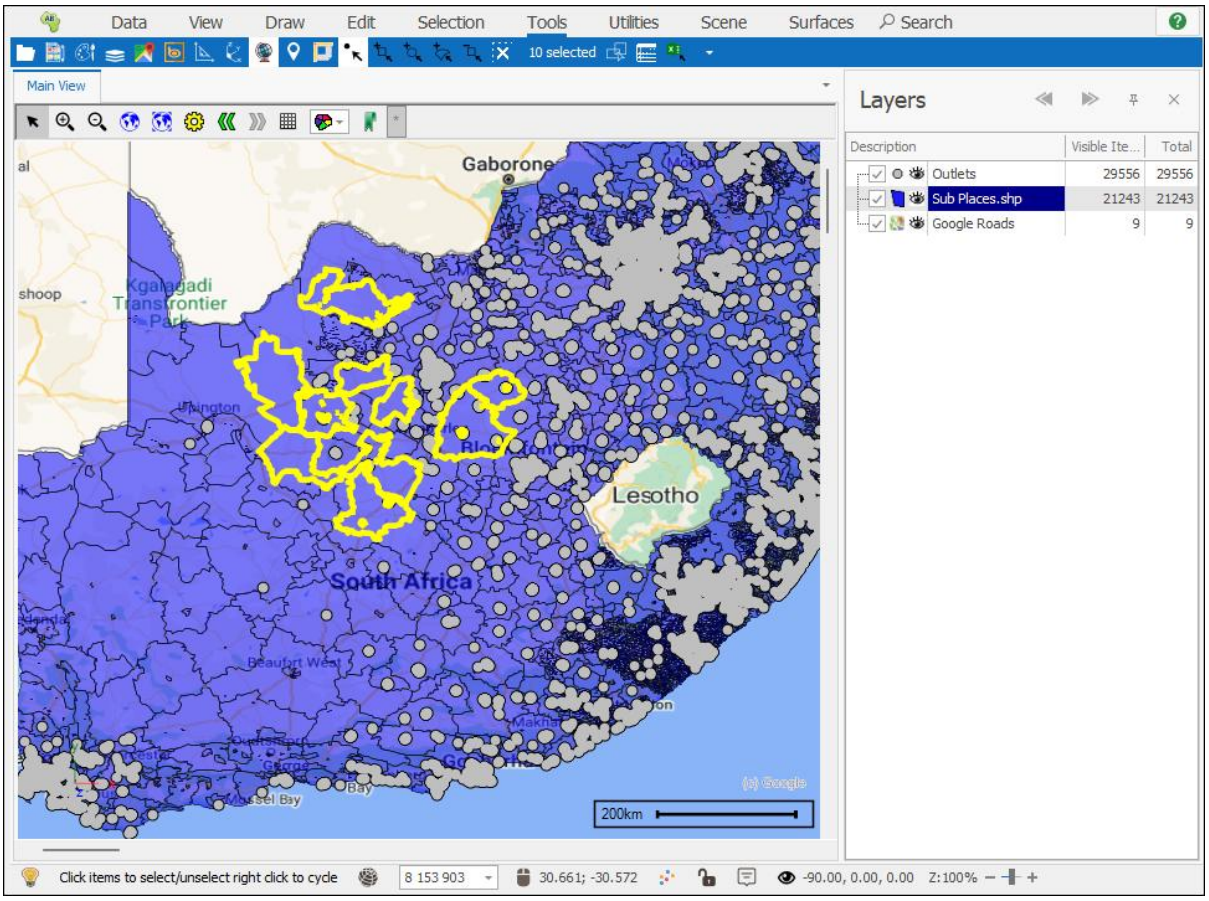
If you only want to classify selected elements in your target layer, then you would tick on **Classify Selected Only** and then select the elements in the scene with one of the selection tools before running the operation:


Classify by inclusion
Layer to Classify: Outlets
Classify selected only
Using Layer
Using ShapeFile
Layer: Sub Places.shp
Use selected features only
Drag a column header here to group by that column
Column
New Column
Use
Geometry
Geometry
OBJECTID
OBJECTID
SP_CODE
SP_CODE
SP_NAME
SP_NAME
Classify

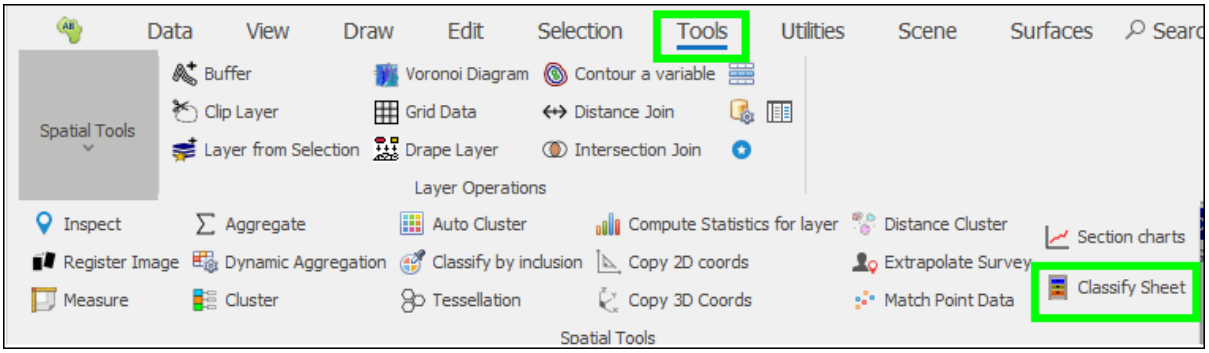

Data
View
Draw
Edit
Selection
Tools
Utilities
Scene
Surfaces
Search
5937 selected
Main View
Layers
Description
Visible Ite...
Total
Outlets
29556
29556
Sub Places.shp
21243
21243
Google Roads
0
0
Botswana
Gaborone
Lesotho
South Africa
Keetmanshoop
Mariental
Gobabis
200km
9 784 684
31.702; -25.317
-90.00, 0.00, 0.00
Z:100%

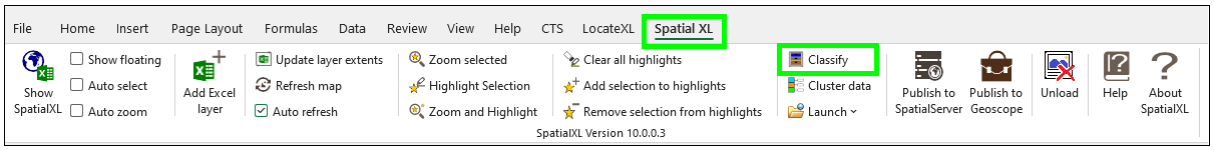
Similarly, if you only want to use selected elements in the area layer to classify with, then you will tick on **Use selected features only** and then select these in the scene with one of the selection tools before running the operation:





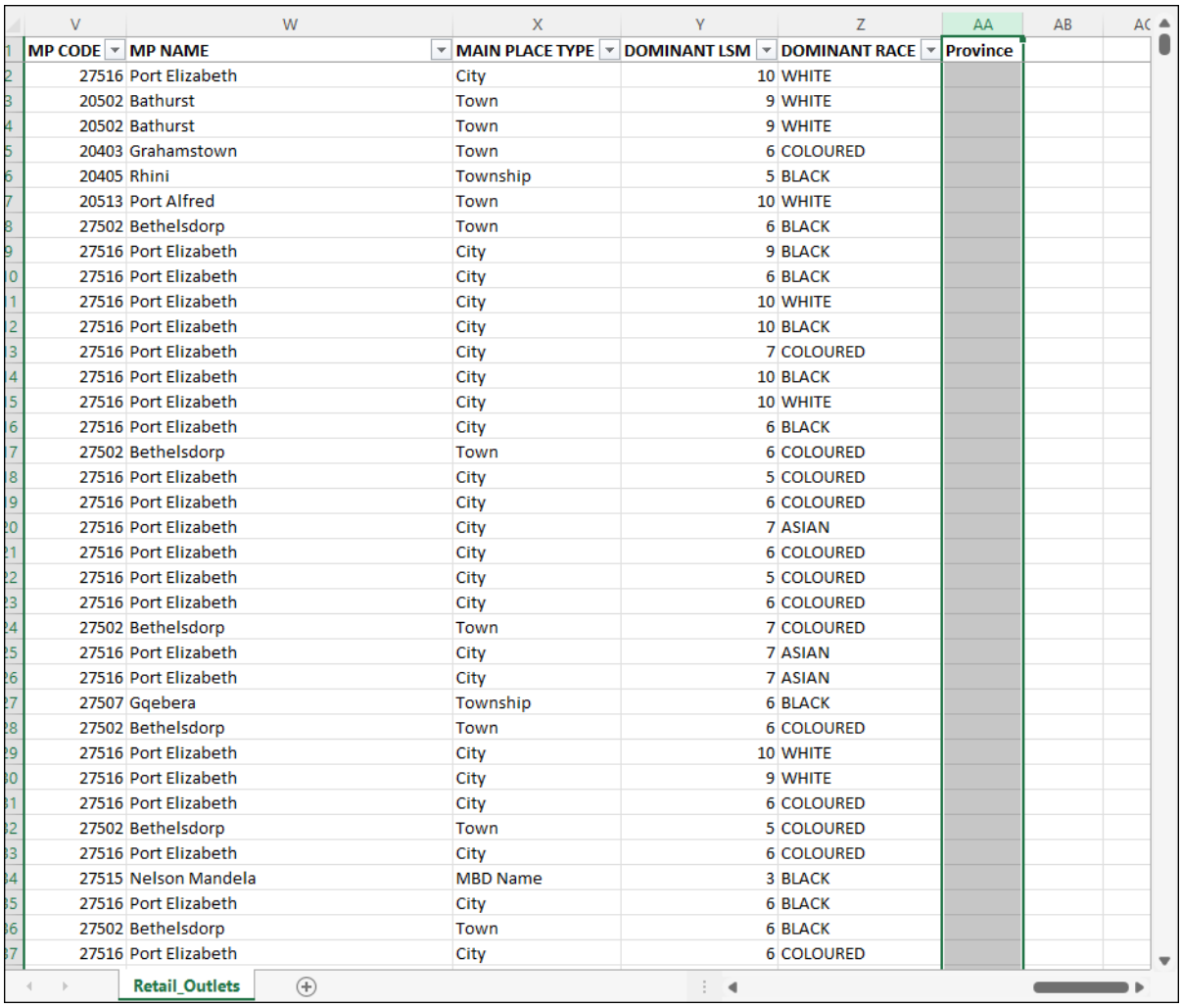
Classify Sheet





Before opening the tool, select the column or columns in your points sheet, that you have added as a layer in SpatialXL, where you want the assigned columns

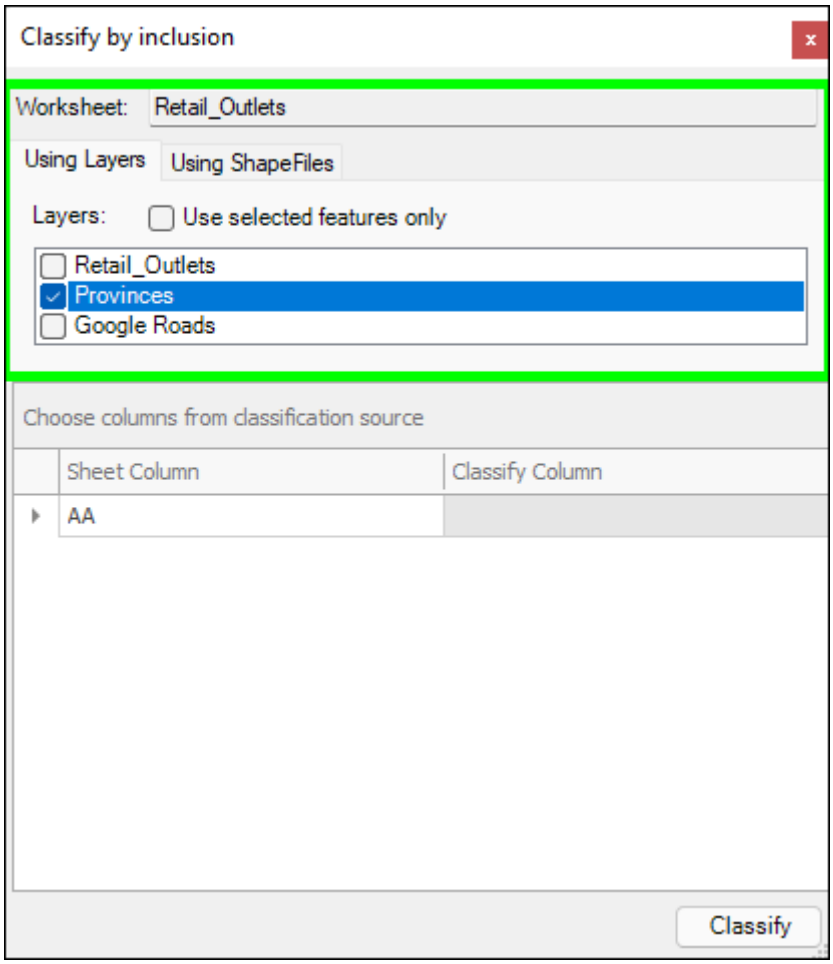
to populate. You can give these columns a name first. I will call the column **Province** since the province name that my Retail Outlets fall in is what I want assigned in this example:

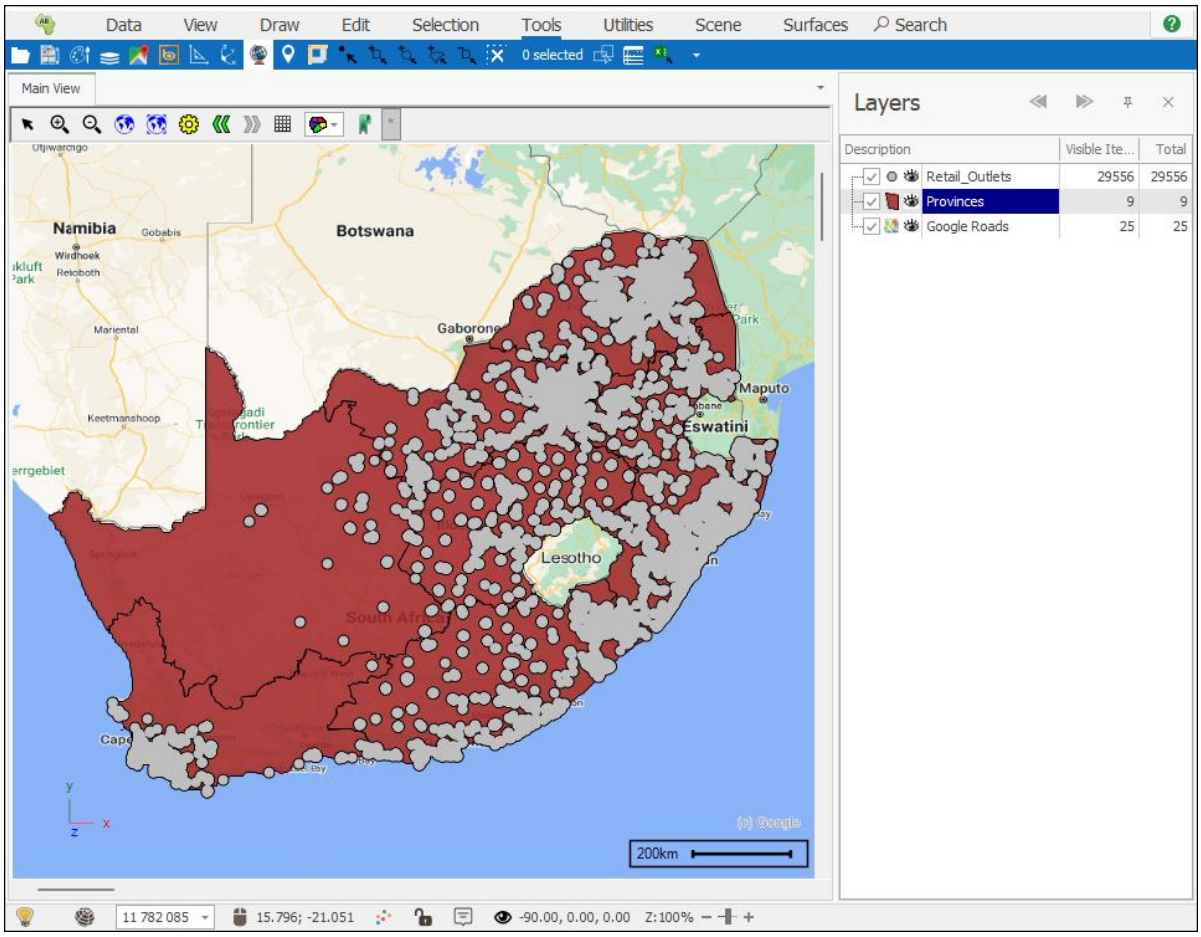


	V	W	X	Y	Z	AA	AB	AC
1	MP CODE	MP NAME	MAIN PLACE TYPE	DOMINANT LSM	DOMINANT RACE	Province		
2	27516	Port Elizabeth	City	10	WHITE			
3	20502	Bathurst	Town	9	WHITE			
4	20502	Bathurst	Town	9	WHITE			
5	20403	Grahamstown	Town	6	COLOURED			
6	20405	Rhini	Township	5	BLACK			
7	20513	Port Alfred	Town	10	WHITE			
8	27502	Bethelsdorp	Town	6	BLACK			
9	27516	Port Elizabeth	City	9	BLACK			
10	27516	Port Elizabeth	City	6	BLACK			
11	27516	Port Elizabeth	City	10	WHITE			
12	27516	Port Elizabeth	City	10	BLACK			
13	27516	Port Elizabeth	City	7	COLOURED			
14	27516	Port Elizabeth	City	10	BLACK			
15	27516	Port Elizabeth	City	10	WHITE			
16	27516	Port Elizabeth	City	6	BLACK			
17	27502	Bethelsdorp	Town	6	COLOURED			
18	27516	Port Elizabeth	City	5	COLOURED			
19	27516	Port Elizabeth	City	6	COLOURED			
20	27516	Port Elizabeth	City	7	ASIAN			
21	27516	Port Elizabeth	City	6	COLOURED			
22	27516	Port Elizabeth	City	5	COLOURED			
23	27516	Port Elizabeth	City	6	COLOURED			
24	27502	Bethelsdorp	Town	7	COLOURED			
25	27516	Port Elizabeth	City	7	ASIAN			
26	27516	Port Elizabeth	City	7	ASIAN			
27	27507	Gqebera	Township	6	BLACK			
28	27502	Bethelsdorp	Town	6	COLOURED			
29	27516	Port Elizabeth	City	10	WHITE			
30	27516	Port Elizabeth	City	9	WHITE			
31	27516	Port Elizabeth	City	6	COLOURED			
32	27502	Bethelsdorp	Town	5	COLOURED			
33	27516	Port Elizabeth	City	6	COLOURED			
34	27515	Nelson Mandela	MBD Name	3	BLACK			
35	27516	Port Elizabeth	City	6	BLACK			
36	27502	Bethelsdorp	Town	6	BLACK			
37	27516	Port Elizabeth	City	6	COLOURED			

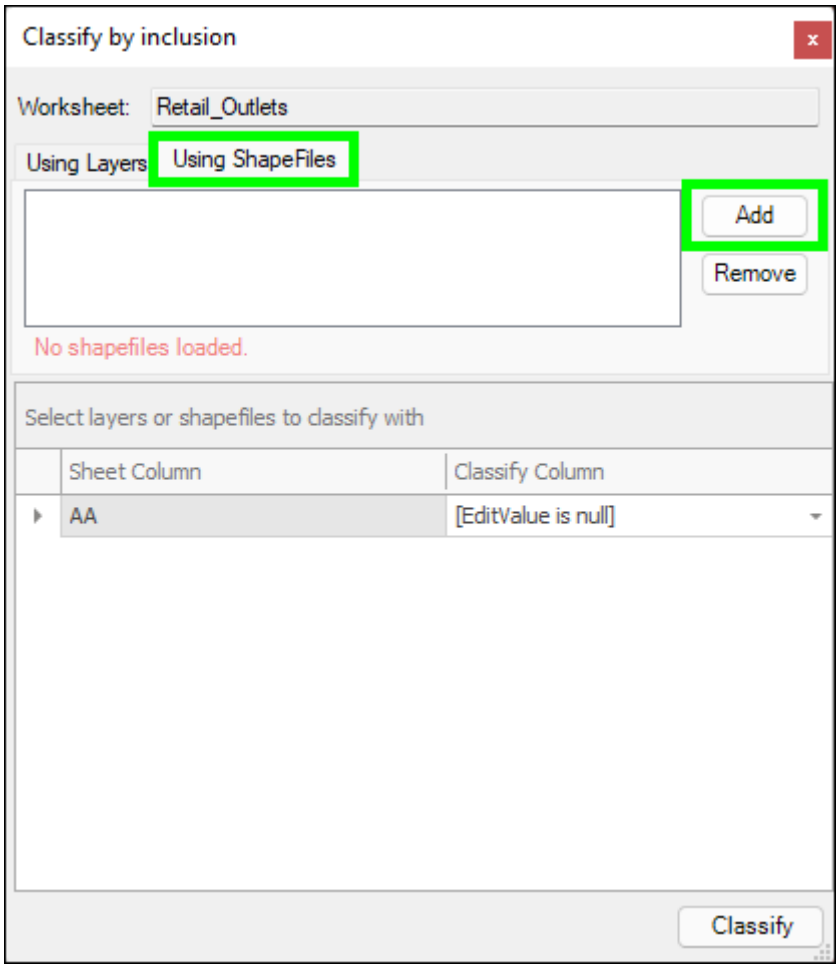
Retail_Outlets

Open the tool. The worksheet you are currently on is populated by **Worksheet**. In the **Using Layers** tab below choose the area layer/s that you will be using to do the classify, in this case it is my **Provinces** layer:

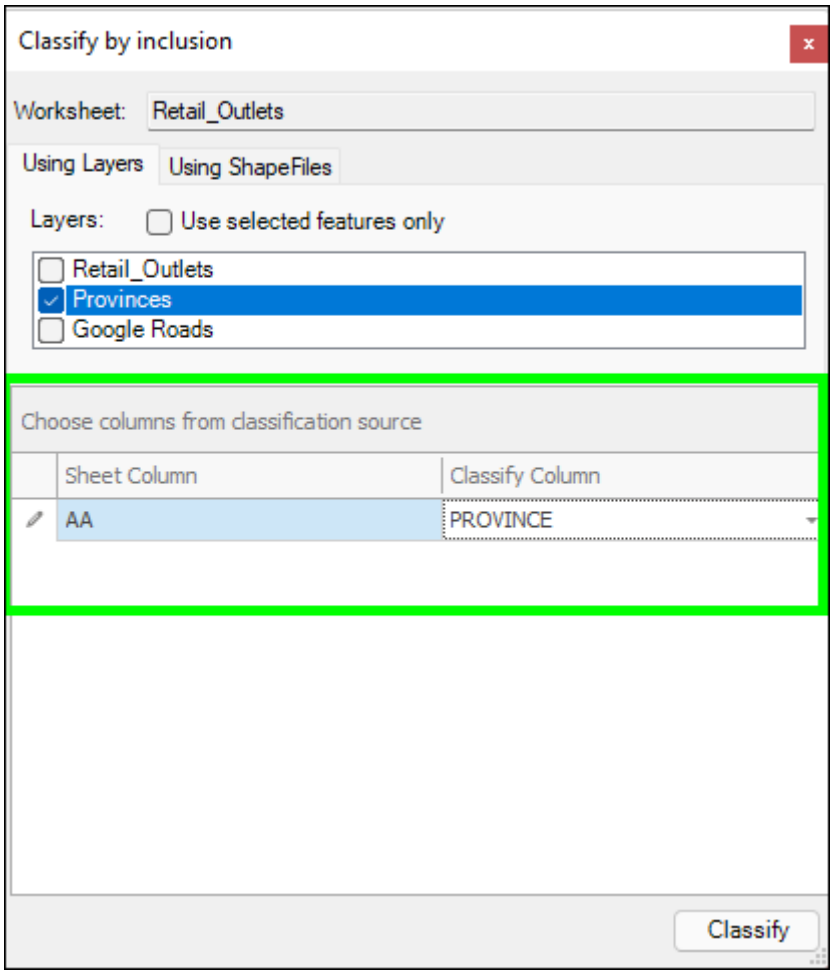

Classify by inclusion
Worksheet:
Retail_Outlets
Using Layers
Using ShapeFiles
Layers:
Use selected features only
Retail_Outlets
Provinces
Google Roads
Choose columns from classification source
Sheet Column
Classify Column
AA
Classify



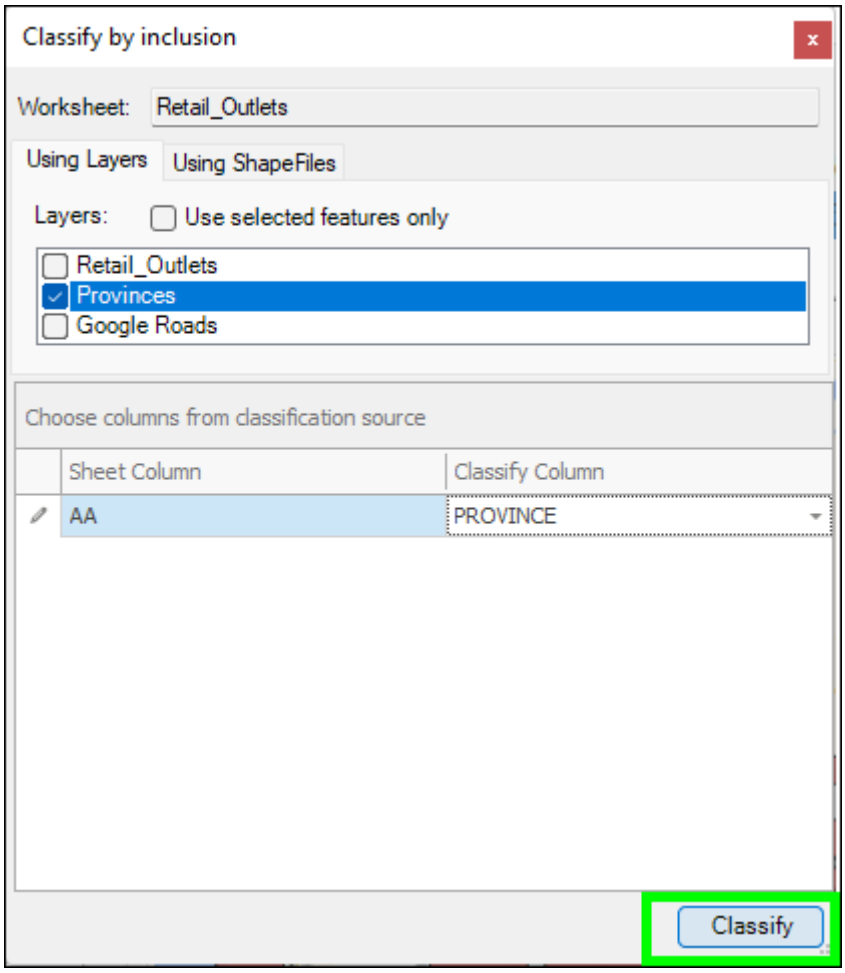
You can also browse to a shapefile/s, that you have not brought in as a layer, to use for the classification instead, in the **Using Shapefiles** tab:

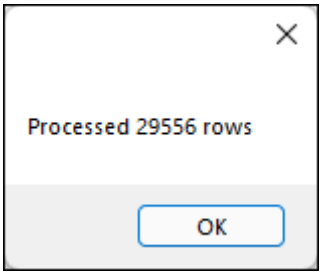


In the grid below, the reference of the sheet column/s you have highlighted is populated, next to this, choose the column/s in the area layer you want assigned in the classify operation, I will choose the PROVINCE column, which has the province name:



When you are done click **Classify**. Your columns have now been assigned in your sheet:

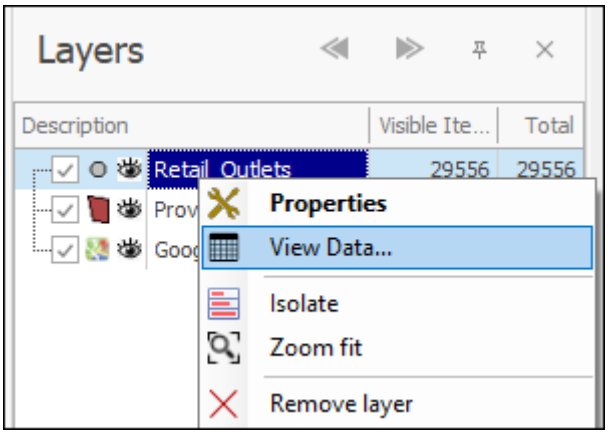

Classify by inclusion
Worksheet:
Retail_Outlets
Using Layers
Using ShapeFiles
Layers:
Use selected features only
Retail_Outlets
Provinces
Google Roads
Choose columns from classification source
Sheet Column
Classify Column
AA
PROVINCE
Classify

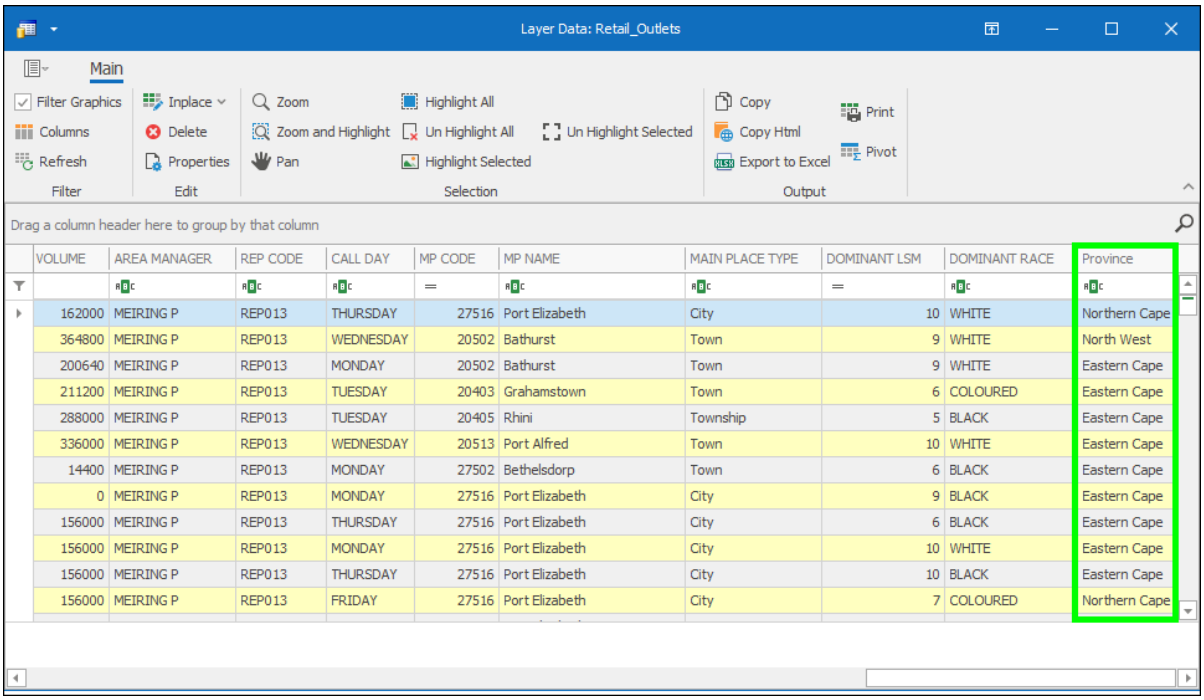

Processed 29556 rows
OK

	V	W	X	Y	Z	AA	AB
1	MP CODE	MP NAME	MAIN PLACE TYPE	DOMINANT LSM	DOMINANT RACE	Province	
2	27516	Port Elizabeth	City	10	WHITE	Northern Cape	
3	20502	Bathurst	Town	9	WHITE	North West	
4	20502	Bathurst	Town	9	WHITE	Eastern Cape	
5	20403	Grahamstown	Town	6	COLOURED	Eastern Cape	
6	20405	Rhini	Township	5	BLACK	Eastern Cape	
7	20513	Port Alfred	Town	10	WHITE	Eastern Cape	
8	27502	Bethelsdorp	Town	6	BLACK	Eastern Cape	
9	27516	Port Elizabeth	City	9	BLACK	Eastern Cape	
10	27516	Port Elizabeth	City	6	BLACK	Eastern Cape	
11	27516	Port Elizabeth	City	10	WHITE	Eastern Cape	
12	27516	Port Elizabeth	City	10	BLACK	Eastern Cape	
13	27516	Port Elizabeth	City	7	COLOURED	Northern Cape	
14	27516	Port Elizabeth	City	10	BLACK	Eastern Cape	
15	27516	Port Elizabeth	City	10	WHITE	Eastern Cape	
16	27516	Port Elizabeth	City	6	BLACK	Eastern Cape	
17	27502	Bethelsdorp	Town	6	COLOURED	Eastern Cape	
18	27516	Port Elizabeth	City	5	COLOURED	Northern Cape	
19	27516	Port Elizabeth	City	6	COLOURED	Eastern Cape	
20	27516	Port Elizabeth	City	7	ASIAN	Eastern Cape	
21	27516	Port Elizabeth	City	6	COLOURED	Eastern Cape	
22	27516	Port Elizabeth	City	5	COLOURED	Eastern Cape	
23	27516	Port Elizabeth	City	6	COLOURED	Eastern Cape	
24	27502	Bethelsdorp	Town	7	COLOURED	Eastern Cape	
25	27516	Port Elizabeth	City	7	ASIAN	Eastern Cape	
26	27516	Port Elizabeth	City	7	ASIAN	Eastern Cape	
27	27507	Gqebera	Township	6	BLACK	Eastern Cape	
28	27502	Bethelsdorp	Town	6	COLOURED	Eastern Cape	
29	27516	Port Elizabeth	City	10	WHITE	Eastern Cape	
30	27516	Port Elizabeth	City	9	WHITE	Eastern Cape	
31	27516	Port Elizabeth	City	6	COLOURED	Eastern Cape	
32	27502	Bethelsdorp	Town	5	COLOURED	Eastern Cape	
33	27516	Port Elizabeth	City	6	COLOURED	Eastern Cape	
34	27515	Nelson Mandela	MBD Name	3	BLACK	Eastern Cape	
35	27516	Port Elizabeth	City	6	BLACK	Eastern Cape	
36	27502	Bethelsdorp	Town	6	BLACK	Eastern Cape	
37	27516	Port Elizabeth	City	6	COLOURED	Eastern Cape	

Retail_Outlets

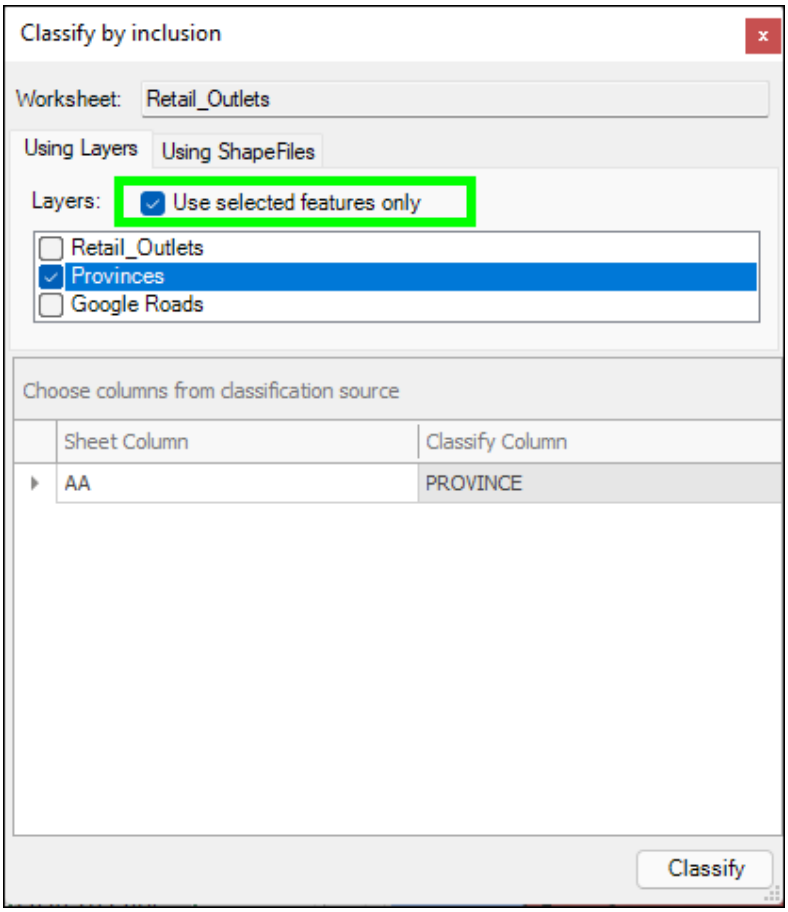
The columns have also been assigned in the Layer Data Grid of my **Retail_Outlets** layer as well:

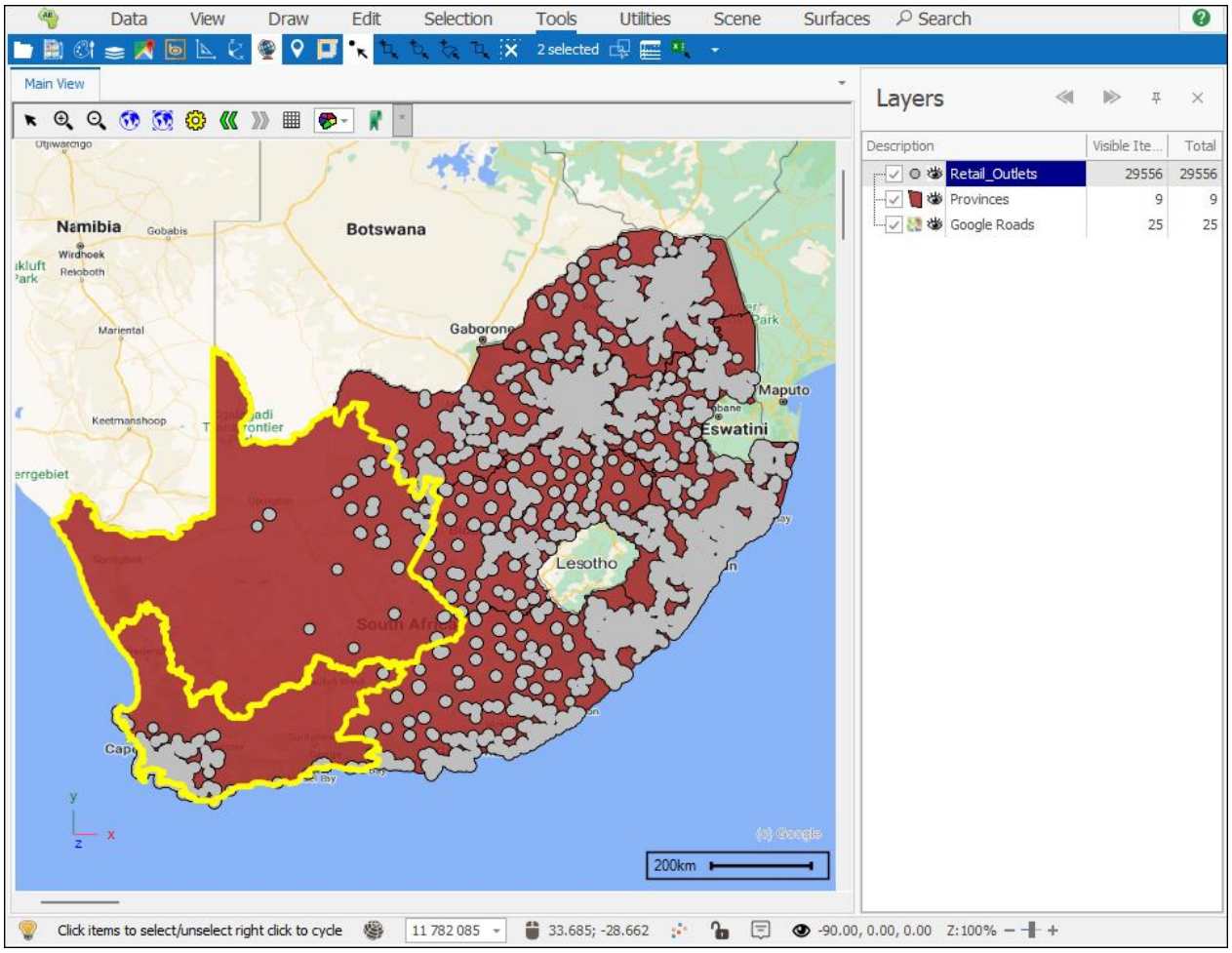




VOLUME	AREA MANAGER	REP CODE	CALL DAY	MP CODE	MP NAME	MAIN PLACE TYPE	DOMINANT LSM	DOMINANT RACE	Province
162000	MEIRING P	REP013	THURSDAY	27516	Port Elizabeth	City	10	WHITE	Northern Cape
364800	MEIRING P	REP013	WEDNESDAY	20502	Bathurst	Town	9	WHITE	North West
200640	MEIRING P	REP013	MONDAY	20502	Bathurst	Town	9	WHITE	Eastern Cape
211200	MEIRING P	REP013	TUESDAY	20403	Grahamstown	Town	6	COLOURED	Eastern Cape
288000	MEIRING P	REP013	TUESDAY	20405	Rhini	Township	5	BLACK	Eastern Cape
336000	MEIRING P	REP013	WEDNESDAY	20513	Port Alfred	Town	10	WHITE	Eastern Cape
14400	MEIRING P	REP013	MONDAY	27502	Bethelsdorp	Town	6	BLACK	Eastern Cape
0	MEIRING P	REP013	MONDAY	27516	Port Elizabeth	City	9	BLACK	Eastern Cape
156000	MEIRING P	REP013	THURSDAY	27516	Port Elizabeth	City	6	BLACK	Eastern Cape
156000	MEIRING P	REP013	MONDAY	27516	Port Elizabeth	City	10	WHITE	Eastern Cape
156000	MEIRING P	REP013	THURSDAY	27516	Port Elizabeth	City	10	BLACK	Eastern Cape
156000	MEIRING P	REP013	FRIDAY	27516	Port Elizabeth	City	7	COLOURED	Northern Cape

If you only want to use selected elements in the area layer to do the classify with, then tick on **Use selected features only** and select the elements in the scene with one of the selection tools, before running the operation:


Classify by inclusion
Worksheet:
Retail_Outlets
Using Layers
Using ShapeFiles
Layers:
Use selected features only
Retail_Outlets
Provinces
Google Roads
Choose columns from classification source
Sheet Column
Classify Column
AA
PROVINCE
Classify


Data
View
Draw
Edit
Selection
Tools
Utilities
Scene
Surfaces
Search
2 selected
Main View
Layers
Description
Visible Ite...
Total
Retail_Outlets
29556
29556
Provinces
9
9
Google Roads
25
25
Namibia
Botswana
Gaborone
Maputo
Eswatini
Lesotho
Keetmanshoop
Mariental
Windhoek
Gobabis
200km
Click items to select/unselect right click to cycle
11 782 085
33.685; -28.662
-90.00, 0.00, 0.00
Z:100%

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1684, South Africa