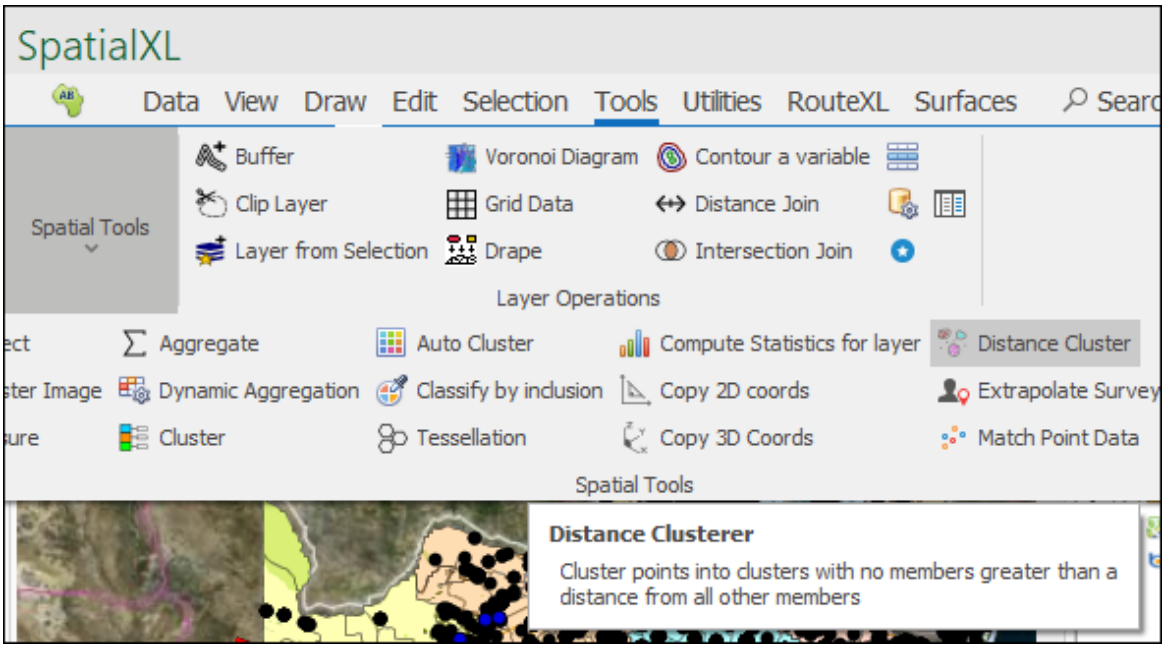
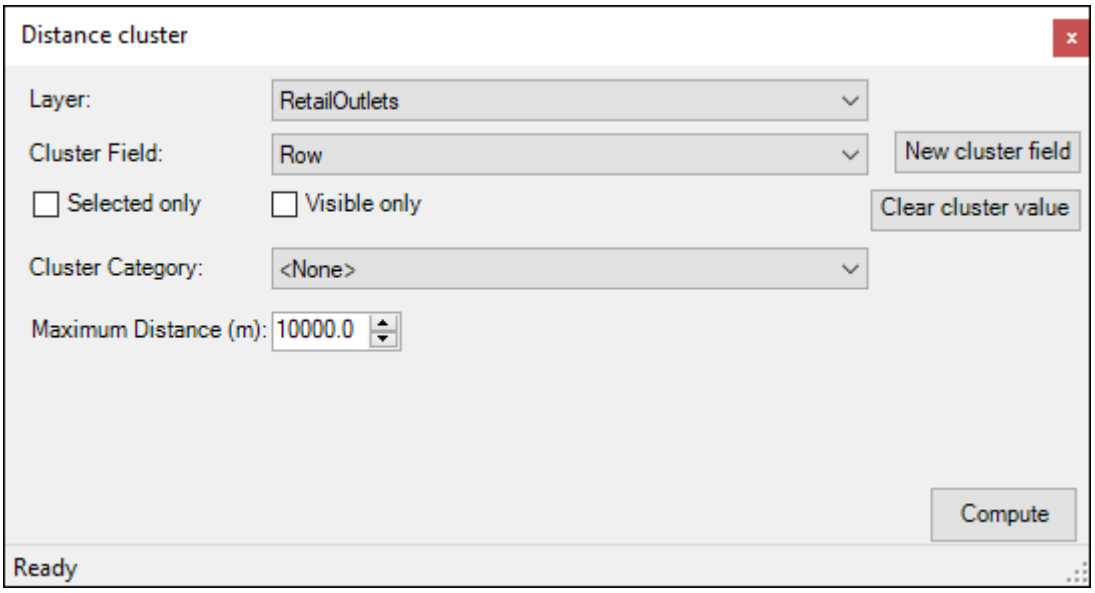
PrimeThought Software Solutions

Distance Cluster

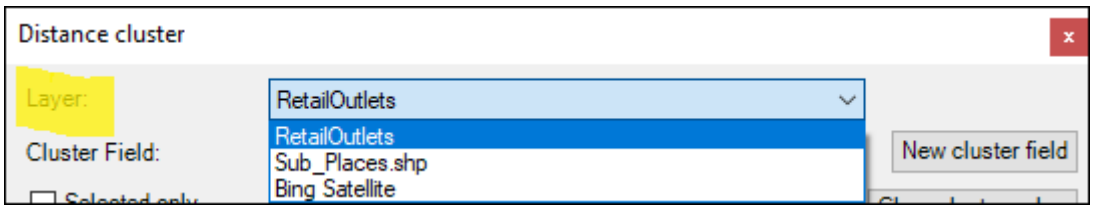
The **Distance Cluster** tool allows you to cluster points into clusters with no members greater than a given distance from each other, it can be found in the following location:



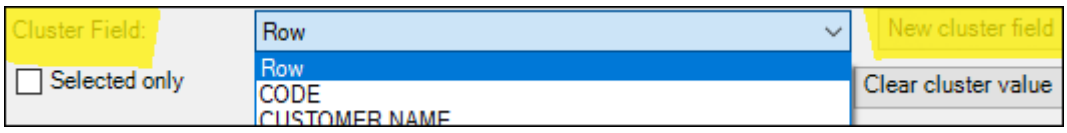
Clicking on it brings up the following dialogue box:



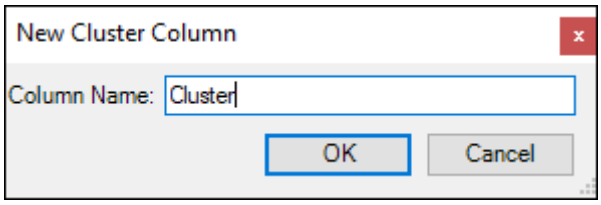
First select the **Layer** that you would like to perform the distance clustering operation on:



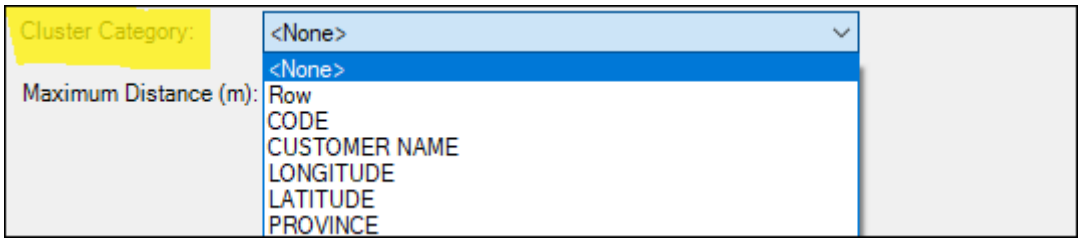
Next choose a field in your data that you would like to use as the **Cluster Field** where the cluster values will populate, or you can create a **New cluster field** by clicking on the button:



Once you've selected to create a new cluster field the following box will come up, enter in the name and when done click **OK**:



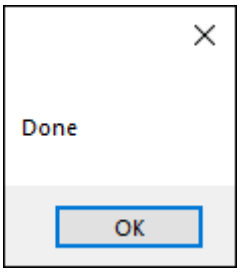
Then you can choose a field in your data to act as the **Cluster Category** which will basically make sure that all the points in a cluster fall within that same category, for example a Province field which will make sure all points in a cluster are of the same province. In this example I will not choose any cluster category:



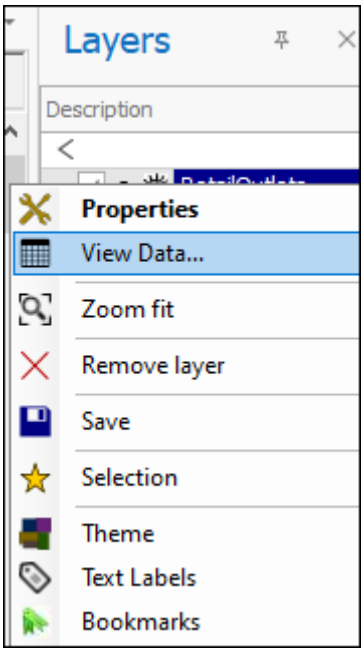
Next enter the **Maximum Distance** that you would like to be maintained between the points in each cluster, here I put 10,000 meters which translates to 10KM:

Finally click **Compute**:

When it's done this box will come up, click **OK**:

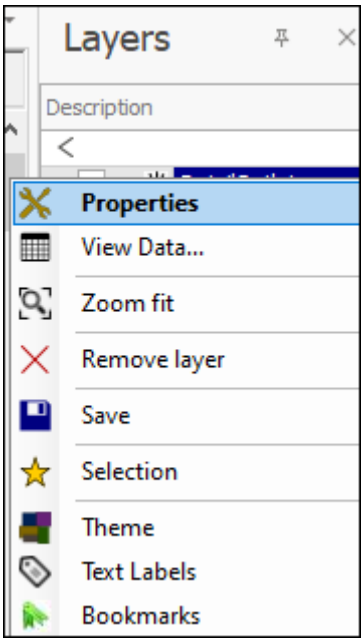


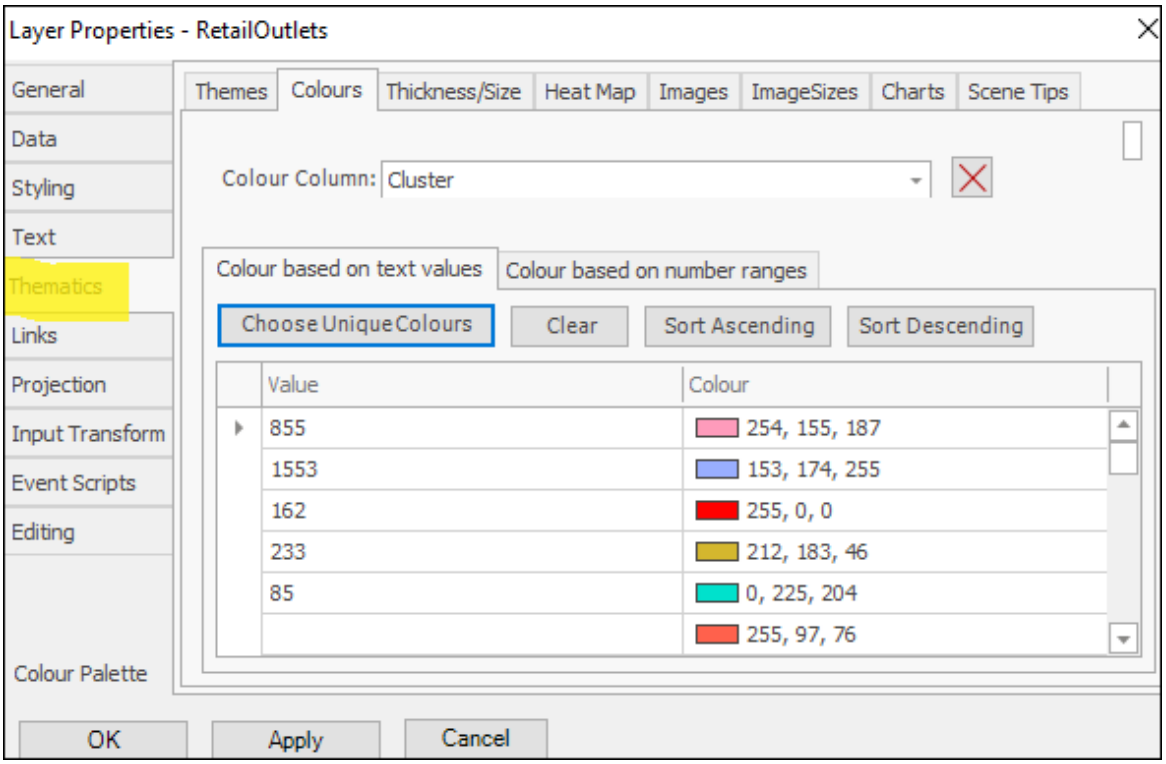
You can then view the resulting clusters in the layer data grid for that layer by right clicking on the layer in the Layer Description box then selecting **View Data**:

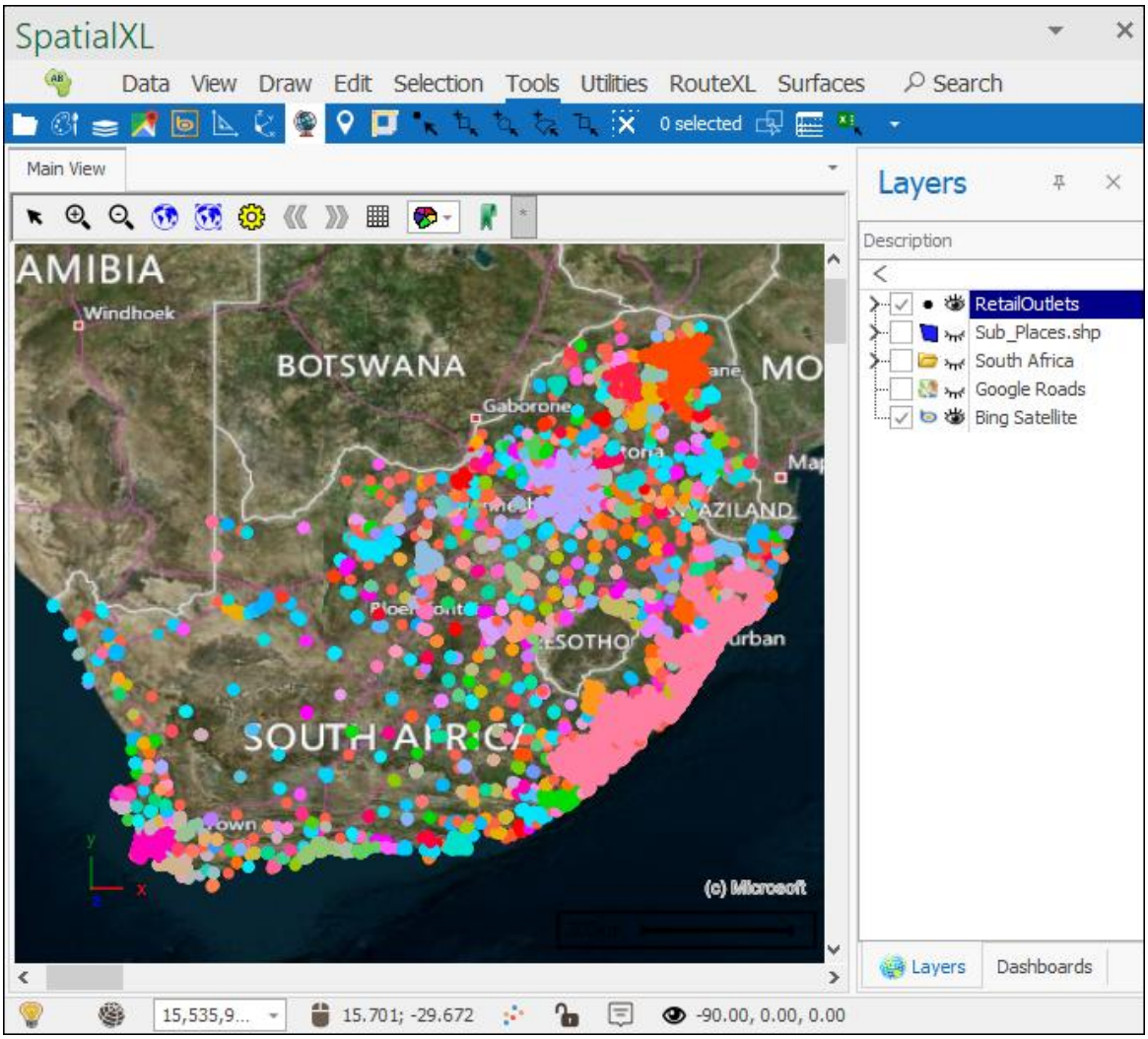


MP ...	MP NAME	MAIN P...	DOMI...	DOMIN...	Cluster
=	ABC	ABC	=	ABC	ABC
27...	Port Elizabeth	City	10	WHITE	855
20...	Bathurst	Town	9	WHITE	1553
20...	Bathurst	Town	9	WHITE	162
20...	Grahamstown	Town	6	COLOU...	233
20...	Rhini	Township	5	BLACK	233
20...	Port Alfred	Town	10	WHITE	162
27...	Bethelsdorp	Town	6	BLACK	85
27...	Port Elizabeth	City	9	BLACK	85
27...	Port Elizabeth	City	6	BLACK	85
27...	Port Elizabeth	City	6	COLOU...	
27...	Port Elizabeth	City	10	WHITE	85
27...	Port Elizabeth	City	10	BLACK	85
27...	Port Elizabeth	City	7	COLOU...	1542
27...	Port Elizabeth	City	10	BLACK	85
27...	Port Elizabeth	City	10	WHITE	85

To see your clusters on your scene you can right click on your layer again and go into **Properties** and then apply some **Thematics** to your layer:

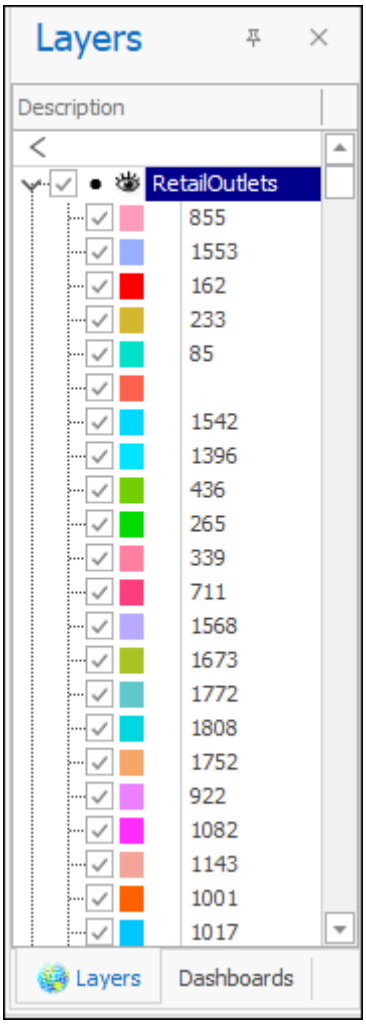



Layer Properties - RetailOutlets
General
Data
Styling
Text
Thematics
Links
Projection
Input Transform
Event Scripts
Editing
Colour Palette
Themes
Colours
Thickness/Size
Heat Map
Images
ImageSizes
Charts
Scene Tips
Colour Column:
Cluster
Colour based on text values
Colour based on number ranges
Choose Unique Colours
Clear
Sort Ascending
Sort Descending
Value
Colour
855
254, 155, 187
1553
153, 174, 255
162
255, 0, 0
233
212, 183, 46
85
0, 225, 204
255, 97, 76
OK
Apply
Cancel

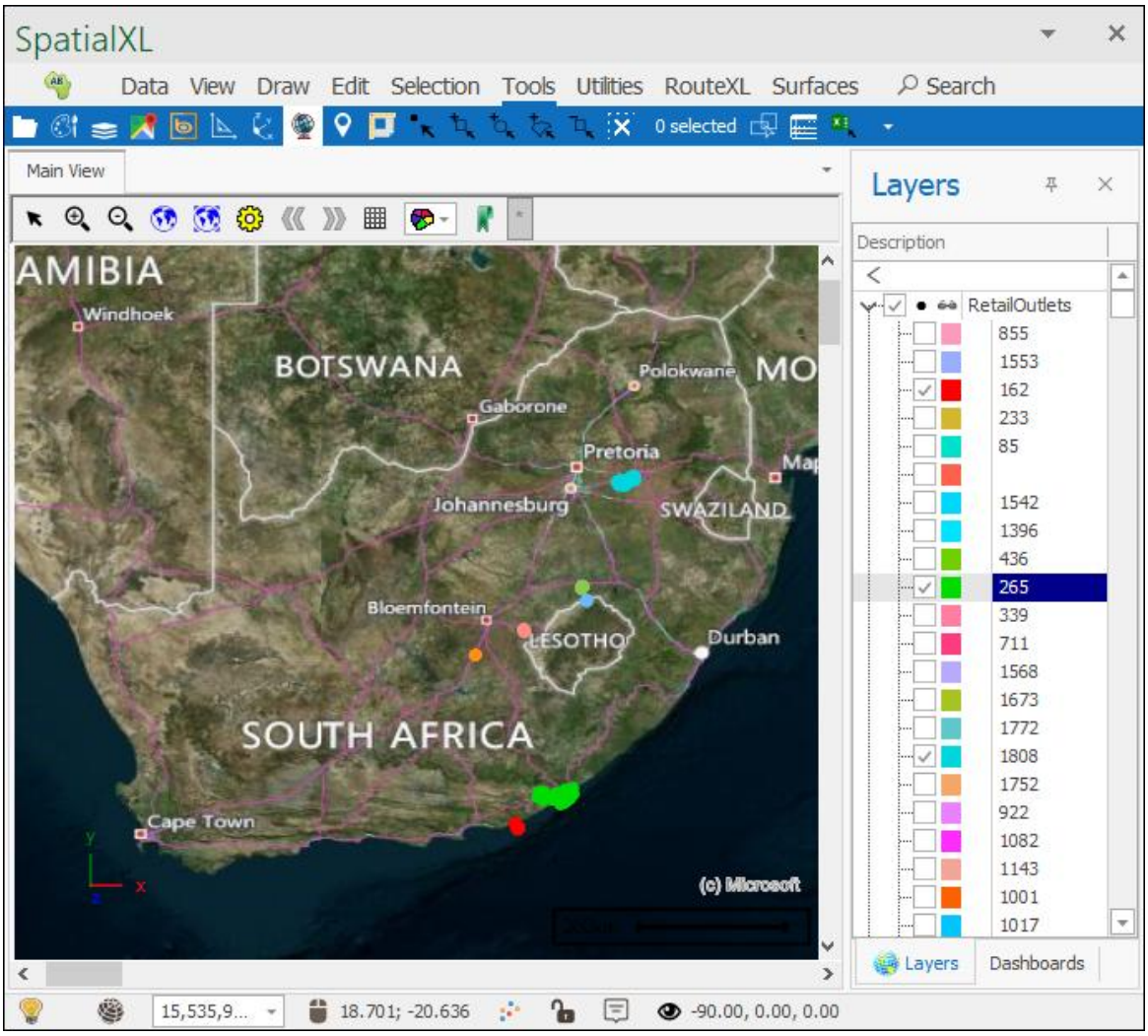


Each cluster that was created respects the maximum distance of 10KM between each point as set in the tool.

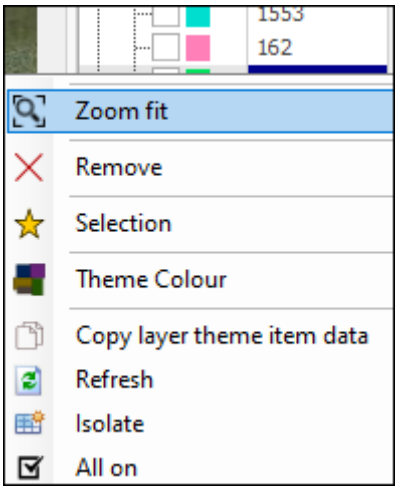
Clicking on the little arrow on the left next to the layer will open a legend of your clusters:

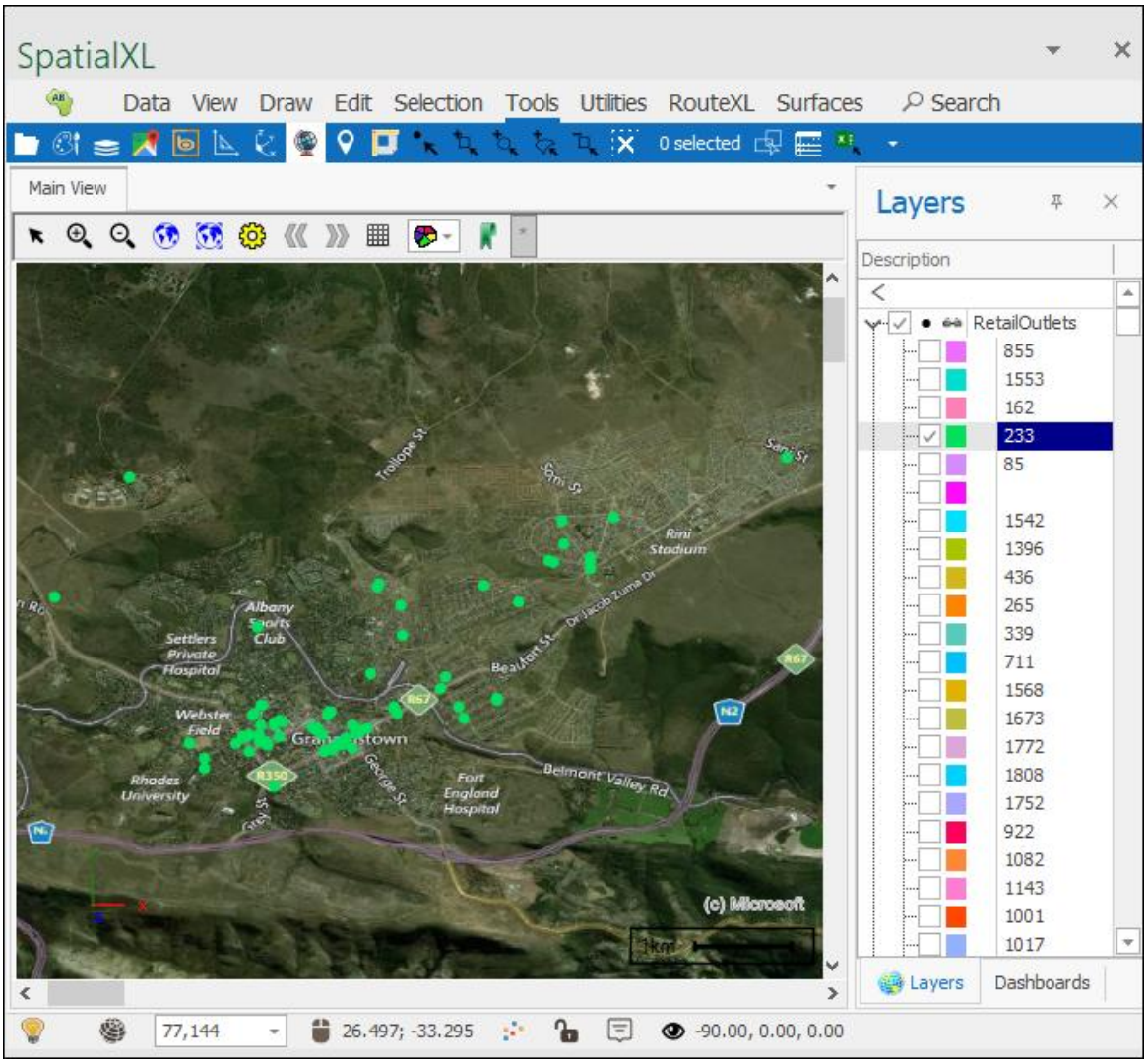


You can then tick any cluster on or off:

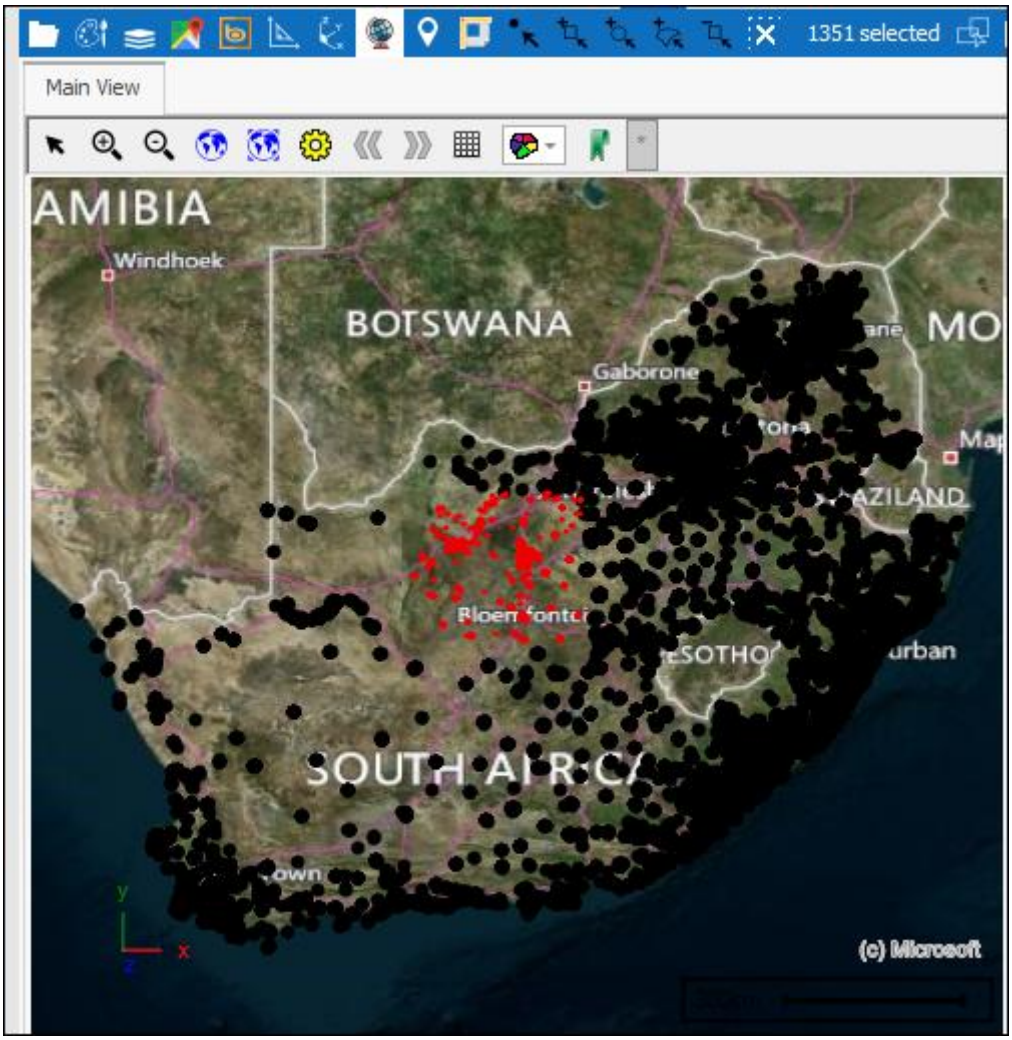


And zoom to a cluster by right clicking on a cluster and selecting **Zoom Fit**. (Note: the cluster must be ticked on in order to zoom to it.):





You can choose to do the clustering operation on only selected points by first selecting the points on your scene using one of the selection tools:

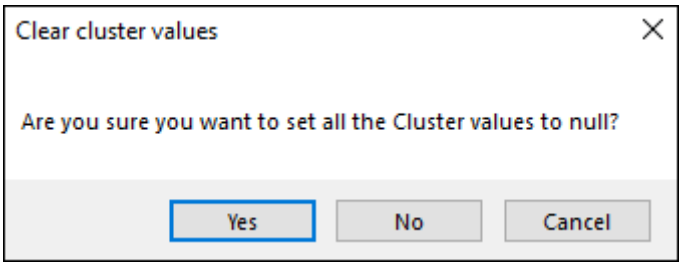


And then make sure to have **Selected only** ticked on in your **Distance Cluster** tool:

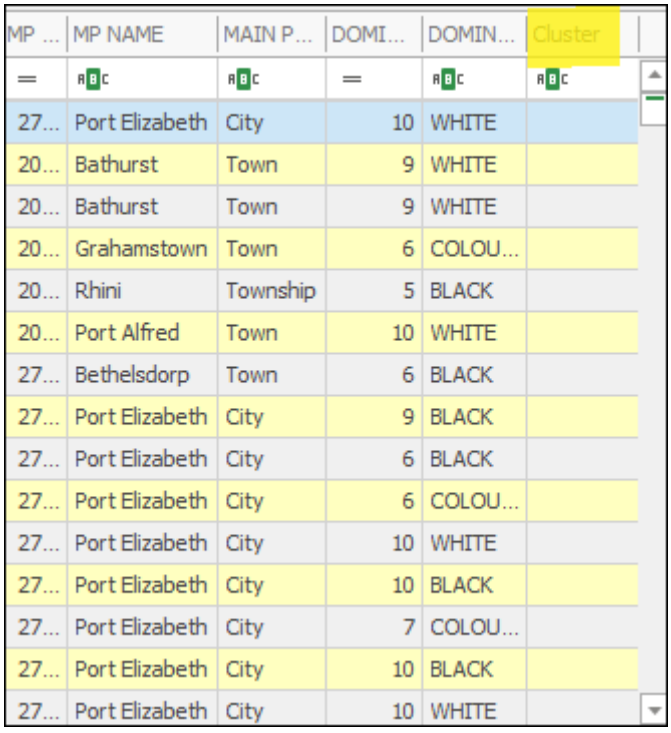
Or if any of your points are set as hidden and you would only like to cluster the visible points make sure to have **Visible only** ticked on:

The **Clear cluster value** button will set all your cluster values as null in your data, this would be used after you had already done the clustering:

The following box will come up, click **Yes**:



In your layer data grid, you will see all cluster values have been set to null:



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20...	Bathurst	Town	9	WHITE	
20...	Bathurst	Town	9	WHITE	
20...	Grahamstown	Town	6	COLOU...	
20...	Rhini	Township	5	BLACK	
20...	Port Alfred	Town	10	WHITE	
27...	Bethelsdorp	Town	6	BLACK	
27...	Port Elizabeth	City	9	BLACK	
27...	Port Elizabeth	City	6	BLACK	
27...	Port Elizabeth	City	6	COLOU...	
27...	Port Elizabeth	City	10	WHITE	
27...	Port Elizabeth	City	10	BLACK	
27...	Port Elizabeth	City	7	COLOU...	
27...	Port Elizabeth	City	10	BLACK	
27...	Port Elizabeth	City	10	WHITE	

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