



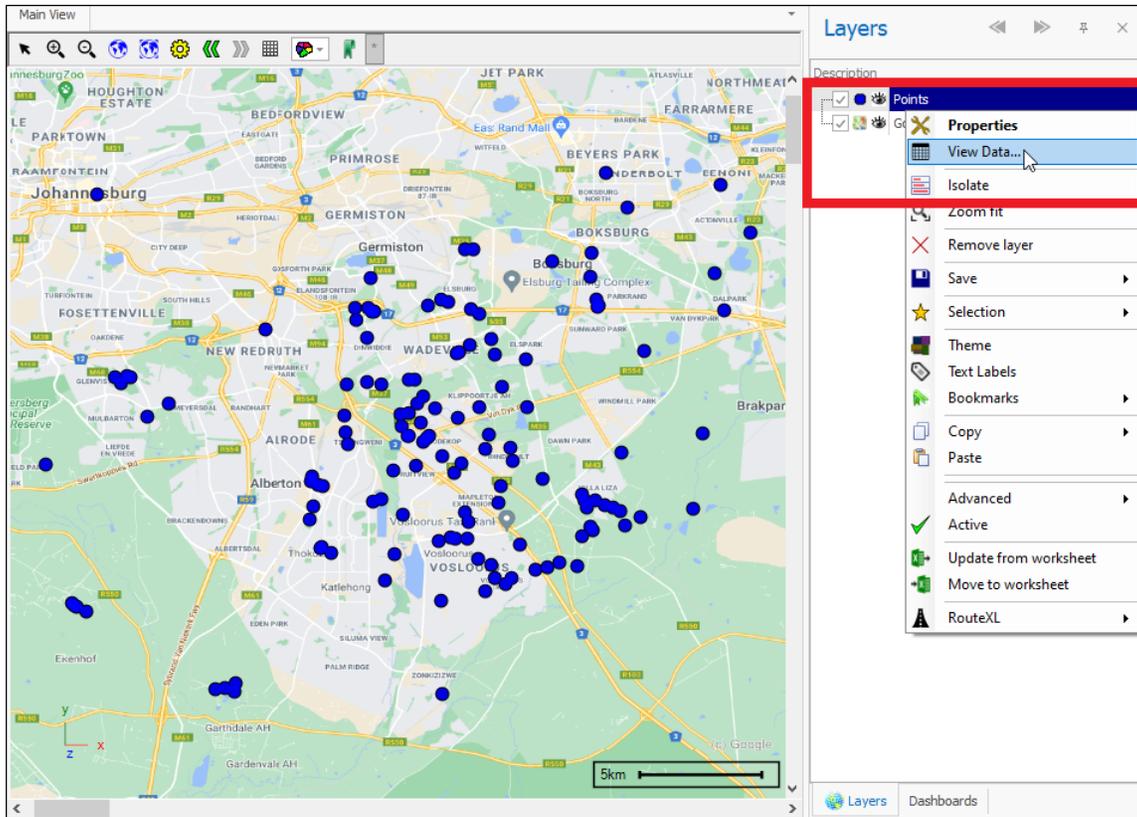
Layer Data Grid

Layer Data Grid	1
Intro	2
Grid.....	4
Filtering	5
Sorting	10
Moving Columns.....	11
Grouping Columns	12
Searching For Data.....	14
Editing Data.....	14
Selecting Rows.....	15
Context Menus	16
Column Header Area Context Menu.....	16
Sort Ascending/Sort Descending	17
Group By This Column	18
Column Chooser.....	27
Best Fit.....	31
Filter Editor	32
Show/Hide Find Panel.....	37
Show/Hide Auto Filter Row.....	38
Conditional Formatting	40
Statistics.....	42
Set Values	43
Add Stored Column.....	44
Extracting Data from Columns.....	56
Add Calculated Column.....	66

Edit Column.....	71
Delete Column.....	73
Grid Context Menu.....	73
Zoom/Highlight/Pan Selected	74
Select/Unselect All	77
Copy Selected Data/Copy as HTML.....	79
Export	80
Print Preview	81
Properties	82
Select/Unselect in Graphics.....	83
Delete.....	84
Bottom Context Menu.....	84
Ribbon	86
Filter	86
Edit	88
Selection	90
Output.....	92

Intro

The **Layer Data Grid** is the data table connected with all layers in all our spatial products. It is accessed by right clicking on the layer and going to **View Data**:



Layer Data: Points

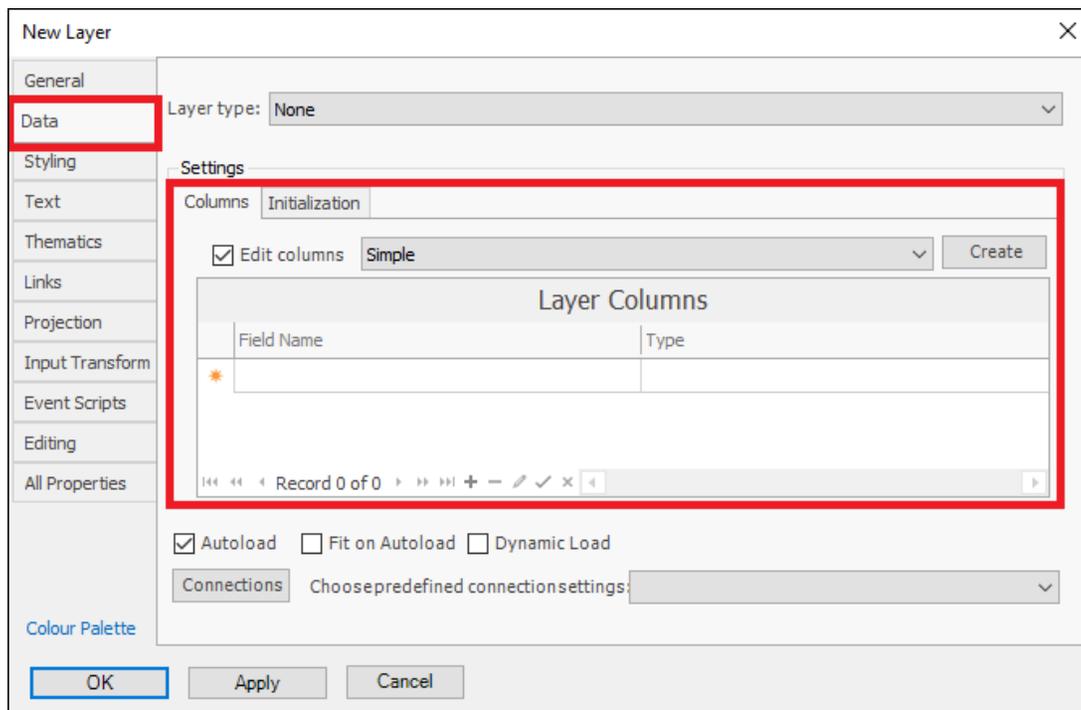
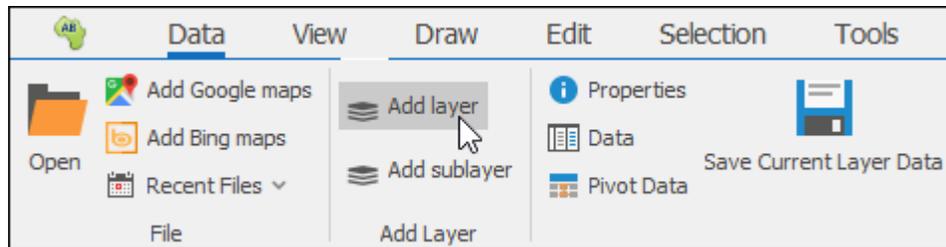
Filter: Filter Graphics, Columns, Refresh
 Edit: Inplace, Delete, Properties
 Selection: Zoom, Zoom and Highlight, Pan, Highlight All, Un Highlight All, Un Highlight Selected, Highlight Selected
 Output: Copy, Copy HTML, Export to Excel, Print, Pivot

Drag a column header here to group by that column

Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected
2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2	<input type="checkbox"/>
3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	<input type="checkbox"/>
4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3	<input type="checkbox"/>
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	<input type="checkbox"/>
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	<input type="checkbox"/>
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	<input type="checkbox"/>
10	11	Point9	28.1972289687847	-26.3179539381111	765	267	3	<input type="checkbox"/>
11	12	Point10	28.189576377199	-26.2916481545351	1000	500	3	<input type="checkbox"/>
12	13	Point11	28.207272995241	-26.291169867561	464	232	3	<input type="checkbox"/>

This is a Layer Data Grid for my **Points** layer. Each row in this grid represents a single point, and as you can see there is an **ID**, **Description** and other data for each

point. How the grid comes about for the layer depends on how the layer was created. In this case this layer was added from Excel and so all the data in my Excel worksheet will make up the grid for the layer. When creating an new empty layer however, you will specify what columns you want the data grid to be made up of, and this is done in the **Layer Properties** box , **Data** tab as gone over in the *Layer Properties Guide*:



We will start by taking up the features of the grid itself:

Grid

Drag a column header here to group by that column

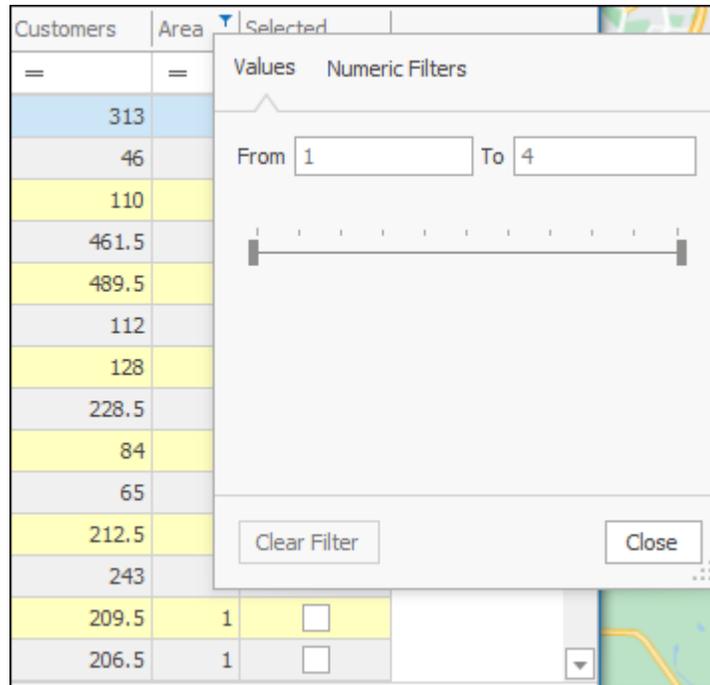
	Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected
▼	=	=	ABC	=	=	=	=	=	■
▶	2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2	<input type="checkbox"/>
	3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	<input type="checkbox"/>
	4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>
	7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>
	8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	<input type="checkbox"/>
	9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	<input type="checkbox"/>
	10	11	Point9	28.1972289687847	-26.3179539381111	765	267	3	<input type="checkbox"/>
	11	12	Point10	28.189576377199	-26.2916481545351	1000	500	3	<input type="checkbox"/>
	12	13	Point11	28.207272995241	-26.291169867561	464	232	3	<input type="checkbox"/>
	13	14	Point12	28.2268827611794	-26.291169867561	134	67	3	<input type="checkbox"/>
	14	15	Point13	28.2264044742053	-26.2715601016225	608	304	3	<input type="checkbox"/>
	15	16	Point14	28.2139690128785	-26.2696469537261	839	419.5	3	<input type="checkbox"/>

Filtering

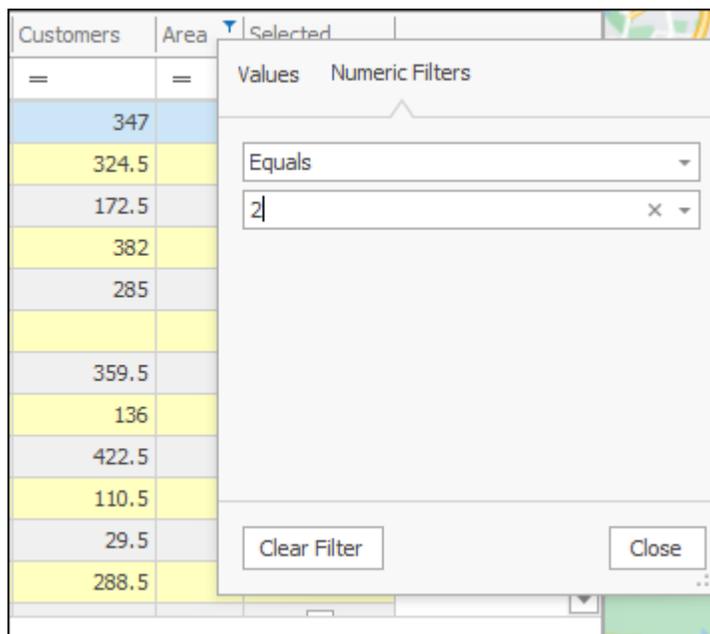
In this grid you can filter on items by clicking the filter icon in the right-hand corner of each column header, made visible by hovering on the header:

Drag a column header here to group by that column

	Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected
▼	=	=	ABC	=	=	=	=	=	■
▶	2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2	<input type="checkbox"/>
	3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	<input type="checkbox"/>
	4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>
	7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>
	8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	<input type="checkbox"/>
	9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	<input type="checkbox"/>
	10	11	Point9	28.1972289687847	-26.3179539381111	765	267	3	<input type="checkbox"/>
	11	12	Point10	28.189576377199	-26.2916481545351	1000	500	3	<input type="checkbox"/>
	12	13	Point11	28.207272995241	-26.291169867561	464	232	3	<input type="checkbox"/>
	13	14	Point12	28.2268827611794	-26.291169867561	134	67	3	<input type="checkbox"/>
	14	15	Point13	28.2264044742053	-26.2715601016225	608	304	3	<input type="checkbox"/>
	15	16	Point14	28.2139690128785	-26.2696469537261	839	419.5	3	<input type="checkbox"/>



For number columns you have an option to filter by number range in the **Values** tab; you can type in the range or adjust the slider. You also have an option to filter by values equal to or greater than etc. in the **Numeric Filters** tab:

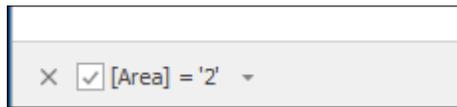
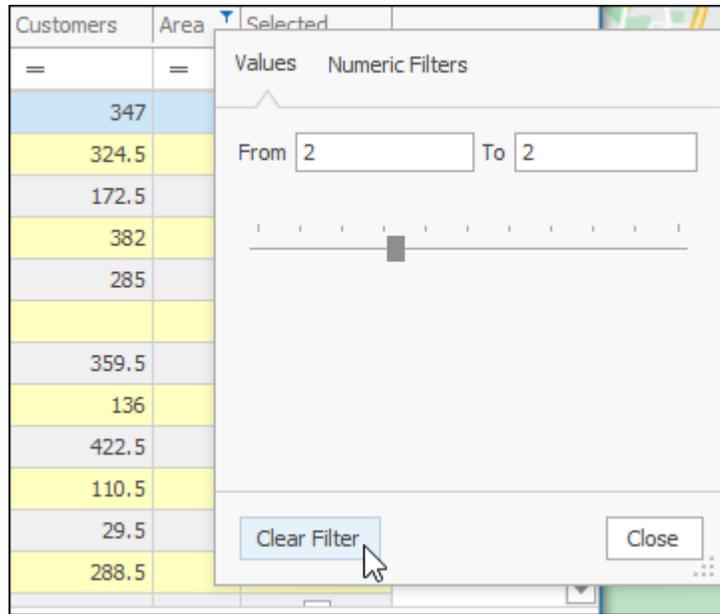


As you can see here, I am choosing to filter on all values equal to 2. Click **Close** when done.

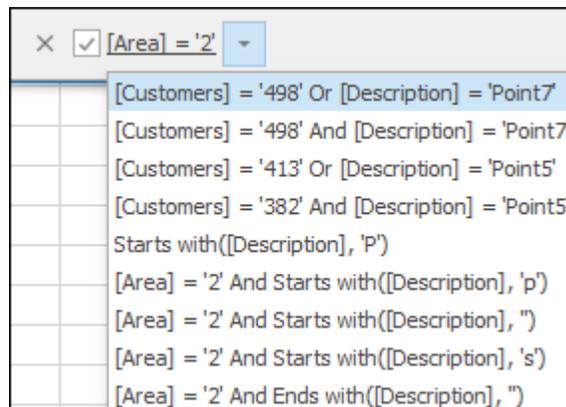
Drag a column header here to group by that column									
	Row	ID	Description	Long	Lat	Total Volume	Customers	Area	selected
▼	=	=	#	=	=	=	=	= 2	<input checked="" type="checkbox"/>
▶	2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>
	7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>
	19	20	Point18	28.163270593623	-26.238080013435	570	285	2	<input type="checkbox"/>
	20	21	Point19	28.1623140196748	-26.2505154747618	337		2	<input type="checkbox"/>
	21	22	Point20	28.1613574457266	-26.2624726491145	719	359.5	2	<input type="checkbox"/>
	22	23	Point21	28.1202247659533	-26.2591246402957	272	136	2	<input type="checkbox"/>
	23	24	Point22	28.1565745759855	-26.2505154747618	845	422.5	2	<input type="checkbox"/>
	31	32	Point30	28.1532265671667	-26.2816041280788	221	110.5	2	<input type="checkbox"/>
	32	33	Point31	28.1613574457266	-26.2806475541306	59	29.5	2	<input type="checkbox"/>
	38	39	Point37	28.1527482801926	-26.3012138940173	577	288.5	2	<input type="checkbox"/>

× [Area] = '2' Edit Filter

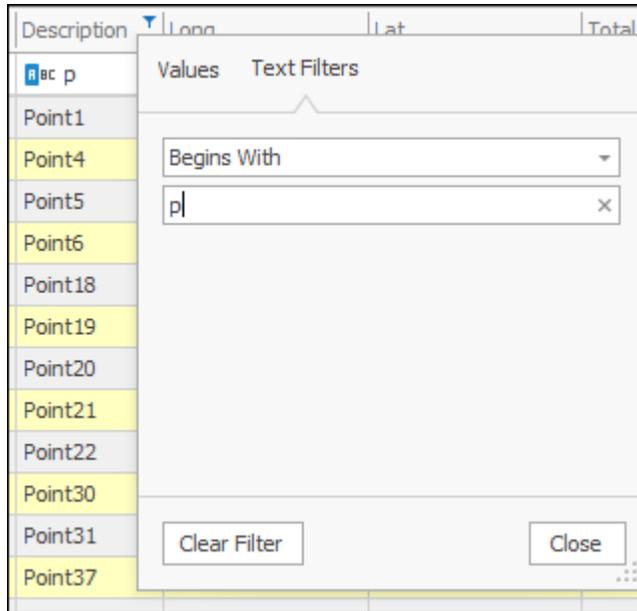
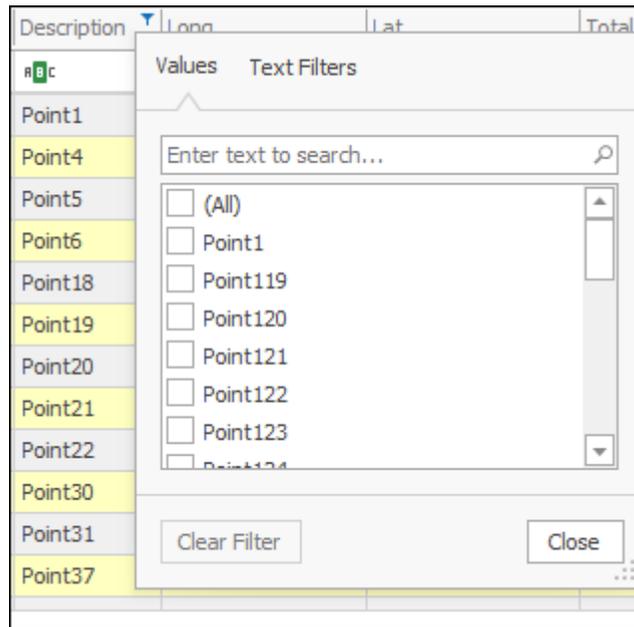
And you can see the filter is now active by the blue filter icon showing in the header and the checkbox in the bottom left corner. To clear the filter, click on the filter icon again and click **Clear Filter** or you can just uncheck the filter checkbox in the bottom left:



By dropping down on this bottom left box you can also get data on what values have not been included in the filtered values:



For text columns you have an option to filter on values in the **Values** tab or filter using specific parameters in the **Text Filters** tab:



You can also filter on values by directly typing in the value you are looking for in the box below the header and even choosing the parameters by clicking on the = symbol (for number columns) or **ABC** symbol (for text columns):

ID	Description	Long	Lat
=	ABC Point5	=	=
7	Clear Filter		
52	= Equals		
53			
54	≠ Does not equal		
55	ABC Contains		
56	ABC Does not contain		
57			
58	%C Is like		
59	%C Is not like		
60	ABC Begins with		
61	ABC Ends with		
	> Is greater than		
	≥ Is greater than or equal to		
	< Is less than		
	≤ Is less than or equal to		

Sorting

You can sort columns in ascending or descending order by clicking once on the column header for ascending and twice for descending. The sorting will be indicated by a downward arrow for descending or upward arrow for ascending:

Drag a column header here to group by that column										
	Row	ID	Descript... ▲	Long	Lat	Total Volume	Customers	Area	Selected	• Actual Ge...
▼	=	=	ABC	=	=	=	=	=	<input type="checkbox"/>	=
	101	102	Point100	28.2167940060339	-26.2828746147586	763	381.5	3	<input type="checkbox"/>	POINT(28.2...
	102	103	Point101	28.2202153817126	-26.3073130124635	946	473	3	<input type="checkbox"/>	POINT(28.2...
	103	104	Point102	28.2153277021716	-26.3297963383519	761	380.5	3	<input type="checkbox"/>	POINT(28.2...
	104	105	Point103	28.2031085033192	-26.3376166256174	938	469	3	<input type="checkbox"/>	POINT(28.2...
	105	106	Point104	28.2026197353651	-26.3444593769748	798	399	3	<input type="checkbox"/>	POINT(28.2...
	106	107	Point105	28.207018646952	-26.3527684321944	444	222	3	<input type="checkbox"/>	POINT(28.2...
	107	108	Point106	28.2138613983093	-26.36058871946	605	302.5	4	<input type="checkbox"/>	POINT(28.2...
	108	109	Point107	28.2207041496667	-26.36058871946	362	181	4	<input type="checkbox"/>	POINT(28.2...
	109	110	Point108	28.2304795087486	-26.3571673437813	349	174.5	4	<input type="checkbox"/>	POINT(28.2...

Moving Columns

To move columns around simply click on the column header and drag to the desired place; as you hover over where you want to place it you will see a pair of blue arrows indicating you can drop it there:

Drag a column header here to group by that column

Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected	Actual Geom...
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>	POINT(28.1...
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>	POINT(28.1...
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	<input type="checkbox"/>	POINT(28.1...
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	<input type="checkbox"/>	POINT(28.1...
10	11	Point9	28.1972289687847	-26.3179539381111	765	267	3	<input type="checkbox"/>	POINT(28.1...
11	12	Point10	28.189576377199	-26.2916481545351	1000	500	3	<input type="checkbox"/>	POINT(28.1...
12	13	Point11	28.207272995241	-26.291169867561	464	232	3	<input type="checkbox"/>	POINT(28.2...
13	14	Point12	28.2268827611794	-26.291169867561	134	67	3	<input type="checkbox"/>	POINT(28.2...
14	15	Point13	28.2264044742053	-26.2715601016225	608	304	3	<input type="checkbox"/>	POINT(28.2...
15	16	Point14	28.2139690128785	-26.2696469537261	839	419.5	3	<input type="checkbox"/>	POINT(28.2...
16	17	Point15	28.2125341519562	-26.2629509360886	996	498	3	<input type="checkbox"/>	POINT(28.2...
17	18	Point16	28.2048815603704	-26.2266011260564	582	291	3	<input type="checkbox"/>	POINT(28.2...
18	19	Point17	28.2015335515517	-26.2266011260564	381	190.5	3	<input type="checkbox"/>	POINT(28.2...
19	20	Point18	28.163270593623	-26.238080013435	570	285	2	<input type="checkbox"/>	POINT(28.1...
20	21	Point19	28.1623140196748	-26.2505154747618	337		2	<input type="checkbox"/>	POINT(28.1...

Drag a column header here to group by that column

Row	ID	Description	Long	Total Volume	Total Volume	Customers	Area	Selected	Actual Geom...
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>	POINT(28.1...
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>	POINT(28.1...
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	<input type="checkbox"/>	POINT(28.1...
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	<input type="checkbox"/>	POINT(28.1...
10	11	Point9	28.1972289687847	-26.3179539381111	765	267	3	<input type="checkbox"/>	POINT(28.1...
11	12	Point10	28.189576377199	-26.2916481545351	1000	500	3	<input type="checkbox"/>	POINT(28.1...
12	13	Point11	28.207272995241	-26.291169867561	464	232	3	<input type="checkbox"/>	POINT(28.2...
13	14	Point12	28.2268827611794	-26.291169867561	134	67	3	<input type="checkbox"/>	POINT(28.2...
14	15	Point13	28.2264044742053	-26.2715601016225	608	304	3	<input type="checkbox"/>	POINT(28.2...
15	16	Point14	28.2139690128785	-26.2696469537261	839	419.5	3	<input type="checkbox"/>	POINT(28.2...
16	17	Point15	28.2125341519562	-26.2629509360886	996	498	3	<input type="checkbox"/>	POINT(28.2...
17	18	Point16	28.2048815603704	-26.2266011260564	582	291	3	<input type="checkbox"/>	POINT(28.2...
18	19	Point17	28.2015335515517	-26.2266011260564	381	190.5	3	<input type="checkbox"/>	POINT(28.2...
19	20	Point18	28.163270593623	-26.238080013435	570	285	2	<input type="checkbox"/>	POINT(28.1...
20	21	Point19	28.1623140196748	-26.2505154747618	337		2	<input type="checkbox"/>	POINT(28.1...

Drag a column header here to group by that column

Row	ID	Description	Long	Total Volume	Lat	Customers	Area	Selected	Actual Geom...
6	7	Point5	28.1398345318917	345	-26.3313459733861	172.5	2	<input type="checkbox"/>	POINT(28.1...
7	8	Point6	28.1427042537364	764	-26.348564304454	382	2	<input type="checkbox"/>	POINT(28.1...
8	9	Point7	28.1728363331052	256	-26.3509557393245	128	3	<input type="checkbox"/>	POINT(28.1...
9	10	Point8	28.1910112381213	534	-26.3456945826093	267	3	<input type="checkbox"/>	POINT(28.1...
10	11	Point9	28.1972289687847	765	-26.3179539381111	267	3	<input type="checkbox"/>	POINT(28.1...
11	12	Point10	28.189576377199	1000	-26.2916481545351	500	3	<input type="checkbox"/>	POINT(28.1...
12	13	Point11	28.207272995241	464	-26.291169867561	232	3	<input type="checkbox"/>	POINT(28.2...
13	14	Point12	28.2268827611794	134	-26.291169867561	67	3	<input type="checkbox"/>	POINT(28.2...
14	15	Point13	28.2264044742053	608	-26.2715601016225	304	3	<input type="checkbox"/>	POINT(28.2...
15	16	Point14	28.2139690128785	839	-26.2696469537261	419.5	3	<input type="checkbox"/>	POINT(28.2...
16	17	Point15	28.2125341519562	996	-26.2629509360886	498	3	<input type="checkbox"/>	POINT(28.2...
17	18	Point16	28.2048815603704	582	-26.2266011260564	291	3	<input type="checkbox"/>	POINT(28.2...
18	19	Point17	28.2015335515517	381	-26.2266011260564	190.5	3	<input type="checkbox"/>	POINT(28.2...
19	20	Point18	28.163270593623	570	-26.238080013435	285	2	<input type="checkbox"/>	POINT(28.1...
20	21	Point19	28.1623140196748	337	-26.2505154747618		2	<input type="checkbox"/>	POINT(28.1...

Grouping Columns

You can group your data by a certain column header by dragging it to the top area where it says:

Drag a column header here to group by that column

Drag a column header here to group by that column

Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected	Actual Geom...
2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2	<input type="checkbox"/>	POINT(28.1...
3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	<input type="checkbox"/>	POINT(28.1...
4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3	<input type="checkbox"/>	POINT(28.1...
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	<input type="checkbox"/>	POINT(28.1...
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>	POINT(28.1...
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>	POINT(28.1...
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	<input type="checkbox"/>	POINT(28.1...
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	<input type="checkbox"/>	POINT(28.1...
10	11	Point9	28.1972289687847	-26.3179539381111	765	267	3	<input type="checkbox"/>	POINT(28.1...
11	12	Point10	28.189576377199	-26.2916481545351	1000	500	3	<input type="checkbox"/>	POINT(28.1...
12	13	Point11	28.207272995241	-26.291169867561	464	232	3	<input type="checkbox"/>	POINT(28.2...
13	14	Point12	28.2268827611794	-26.291169867561	134	67	3	<input type="checkbox"/>	POINT(28.2...
14	15	Point13	28.2264044742053	-26.2715601016225	608	304	3	<input type="checkbox"/>	POINT(28.2...
15	16	Point14	28.2139690128785	-26.2696469537261	839	419.5	3	<input type="checkbox"/>	POINT(28.2...
16	17	Point15	28.2125341519562	-26.2629509360886	996	498	3	<input type="checkbox"/>	POINT(28.2...

Area										
Row	ID	Description	Long	Lat	Total Volume	Customers	A...	Selected	Actual Geom...	
=	=	loc	=	=	=	=	=	<input checked="" type="checkbox"/>	=	
<div style="border: 1px solid gray; padding: 2px;"> <div style="border-bottom: 1px solid gray; padding: 2px;"> > Area: 1 </div> <div style="border-bottom: 1px solid gray; padding: 2px;"> > Area: 2 </div> <div style="border-bottom: 1px solid gray; padding: 2px;"> > Area: 3 </div> <div style="border-bottom: 1px solid gray; padding: 2px;"> > Area: 4 </div> </div>										

You can then dropdown on one of these groupings and see all items which fall under that category:

Area																																																																																																																																												
Row	ID	Description	Long	Lat	Total Volume	Customers	A...	Selected	Actual Geom...																																																																																																																																			
=	=	loc	=	=	=	=	=	<input checked="" type="checkbox"/>	=																																																																																																																																			
<div style="border: 1px solid gray; padding: 2px;"> <div style="border-bottom: 1px solid gray; padding: 2px;"> v Area: 1 </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td>60</td><td>61</td><td>Point59</td><td>28.3182355732341</td><td>-26.2199051084188</td><td>130</td><td>65</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.3...</td></tr> <tr><td>62</td><td>63</td><td>Point61</td><td>28.0513514416816</td><td>-26.2041216382733</td><td>486</td><td>243</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>63</td><td>64</td><td>Point62</td><td>28.0633086160344</td><td>-26.2782561192601</td><td>419</td><td>209.5</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>64</td><td>65</td><td>Point63</td><td>28.0303068148209</td><td>-26.3146059292923</td><td>413</td><td>206.5</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>65</td><td>66</td><td>Point64</td><td>28.0417857021995</td><td>-26.3720003661853</td><td>997</td><td>498.5</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>66</td><td>67</td><td>Point65</td><td>28.1034847218595</td><td>-26.4054804543729</td><td>608</td><td>304</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.1...</td></tr> <tr><td>91</td><td>92</td><td>Point90</td><td>28.0716299236672</td><td>-26.295093813611</td><td>314</td><td>157</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>92</td><td>93</td><td>Point91</td><td>28.080427746841</td><td>-26.289717366116</td><td>612</td><td>306</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>93</td><td>94</td><td>Point92</td><td>28.0647871723099</td><td>-26.2789644711259</td><td>340</td><td>170</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>94</td><td>95</td><td>Point93</td><td>28.0608770286771</td><td>-26.2814083108963</td><td>450</td><td>225</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>95</td><td>96</td><td>Point94</td><td>28.0584331889066</td><td>-26.2789644711259</td><td>774</td><td>387</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>126</td><td>127</td><td>Point125</td><td>28.0408375425592</td><td>-26.370852846496</td><td>673</td><td>336.5</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> <tr><td>127</td><td>128</td><td>Point126</td><td>28.0427926143755</td><td>-26.3723191503583</td><td>904</td><td>452</td><td>1</td><td><input type="checkbox"/></td><td>POINT(28.0...</td></tr> </tbody> </table> </div>											60	61	Point59	28.3182355732341	-26.2199051084188	130	65	1	<input type="checkbox"/>	POINT(28.3...	62	63	Point61	28.0513514416816	-26.2041216382733	486	243	1	<input type="checkbox"/>	POINT(28.0...	63	64	Point62	28.0633086160344	-26.2782561192601	419	209.5	1	<input type="checkbox"/>	POINT(28.0...	64	65	Point63	28.0303068148209	-26.3146059292923	413	206.5	1	<input type="checkbox"/>	POINT(28.0...	65	66	Point64	28.0417857021995	-26.3720003661853	997	498.5	1	<input type="checkbox"/>	POINT(28.0...	66	67	Point65	28.1034847218595	-26.4054804543729	608	304	1	<input type="checkbox"/>	POINT(28.1...	91	92	Point90	28.0716299236672	-26.295093813611	314	157	1	<input type="checkbox"/>	POINT(28.0...	92	93	Point91	28.080427746841	-26.289717366116	612	306	1	<input type="checkbox"/>	POINT(28.0...	93	94	Point92	28.0647871723099	-26.2789644711259	340	170	1	<input type="checkbox"/>	POINT(28.0...	94	95	Point93	28.0608770286771	-26.2814083108963	450	225	1	<input type="checkbox"/>	POINT(28.0...	95	96	Point94	28.0584331889066	-26.2789644711259	774	387	1	<input type="checkbox"/>	POINT(28.0...	126	127	Point125	28.0408375425592	-26.370852846496	673	336.5	1	<input type="checkbox"/>	POINT(28.0...	127	128	Point126	28.0427926143755	-26.3723191503583	904	452	1	<input type="checkbox"/>	POINT(28.0...
60	61	Point59	28.3182355732341	-26.2199051084188	130	65	1	<input type="checkbox"/>	POINT(28.3...																																																																																																																																			
62	63	Point61	28.0513514416816	-26.2041216382733	486	243	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
63	64	Point62	28.0633086160344	-26.2782561192601	419	209.5	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
64	65	Point63	28.0303068148209	-26.3146059292923	413	206.5	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
65	66	Point64	28.0417857021995	-26.3720003661853	997	498.5	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
66	67	Point65	28.1034847218595	-26.4054804543729	608	304	1	<input type="checkbox"/>	POINT(28.1...																																																																																																																																			
91	92	Point90	28.0716299236672	-26.295093813611	314	157	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
92	93	Point91	28.080427746841	-26.289717366116	612	306	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
93	94	Point92	28.0647871723099	-26.2789644711259	340	170	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
94	95	Point93	28.0608770286771	-26.2814083108963	450	225	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
95	96	Point94	28.0584331889066	-26.2789644711259	774	387	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
126	127	Point125	28.0408375425592	-26.370852846496	673	336.5	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			
127	128	Point126	28.0427926143755	-26.3723191503583	904	452	1	<input type="checkbox"/>	POINT(28.0...																																																																																																																																			

To ungroup simply drag the column header from the top area back to its original location.

Searching For Data

To search for data within your entire data grid, you can click on the magnifying glass in the far right of the grouping area, this will bring up a search bar where you can type in the value and then click **Find**:

Drag a column header here to group by that column										
Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected	Actual Ge...	
2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2	<input type="checkbox"/>	POINT(28.1...	
3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	<input type="checkbox"/>	POINT(28.1...	
4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3	<input type="checkbox"/>	POINT(28.1...	
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	<input type="checkbox"/>	POINT(28.1...	
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>	POINT(28.1...	
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>	POINT(28.1...	
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	<input type="checkbox"/>	POINT(28.1...	
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	<input type="checkbox"/>	POINT(28.1...	

Drag a column header here to group by that column										
Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected	Actual Ge...	
2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2	<input type="checkbox"/>	POINT(28.1...	
3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	<input type="checkbox"/>	POINT(28.1...	
4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3	<input type="checkbox"/>	POINT(28.1...	
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	<input type="checkbox"/>	POINT(28.1...	
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>	POINT(28.1...	
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>	POINT(28.1...	
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	<input type="checkbox"/>	POINT(28.1...	
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	<input type="checkbox"/>	POINT(28.1...	

Editing Data

You can edit values in the grid by simply clicking in the appropriate point in the grid and then entering in the value (if it does not allow you to enter anything in it may be that the column is set as read-only and how to change this will be gone over). A little pencil icon will show on the left indicating that editing is now taking place:

	Row	ID	Description	Long
▼	=	=	ABC	=
✎	2	3	Point1	28.1537048541408
	3	4	Point2	28.1723580461311
	4	5	Point3	28.16757517639
	5	6	Point4	28.1393562449176

Selecting Rows

To select rows, click in the far-left blank area next to the appropriate row; selection is indicated by a little arrow:

	Row	ID	Description	Long	Lat	Customers	Area	Selected
▼	=	=	ABC	=	=	=	=	<input type="checkbox"/>
▶	2	3	Point1	28.1537048541408	-26.3059967637583	347	2	<input type="checkbox"/>
	3	4	Point2	28.1723580461311	-26.3169973641628	413	3	<input type="checkbox"/>
	4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	<input type="checkbox"/>
	7	8	Point6	28.1427042537364	-26.348564304454	382	2	<input type="checkbox"/>
	8	9	Point7	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>
	9	10	Point8	28.1910112381213	-26.3456945826093	267	3	<input type="checkbox"/>

To select more than one row simply click and drag:

	Row	ID	Description	Long	Lat	Customers	Area	Selected
▼	=	=	ABC	=	=	=	=	<input type="checkbox"/>
▶	2	3	Point1	28.1537048541408	-26.3059967637583	347	2	<input type="checkbox"/>
	3	4	Point2	28.1723580461311	-26.3169973641628	413	3	<input type="checkbox"/>
	4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	<input type="checkbox"/>
	7	8	Point6	28.1427042537364	-26.348564304454	382	2	<input type="checkbox"/>
	8	9	Point7	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>
	9	10	Point8	28.1910112381213	-26.3456945826093	267	3	<input type="checkbox"/>

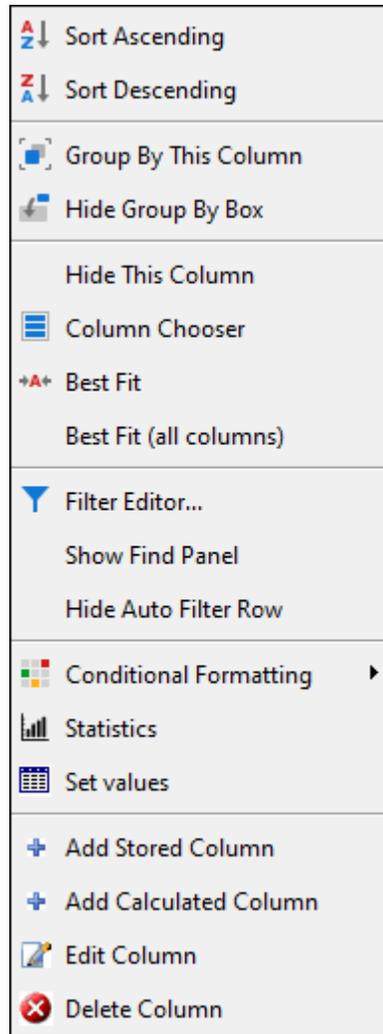
To select all rows, you can do a **ctrl A** just like in Excel.

Context Menus

Right clicking in the grid will bring up two different context menus depending on where you click. We will start by taking up the one that comes up when right clicking in one of the column headers or column header area:

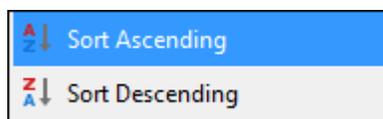
Column Header Area Context Menu

Right clicking in one of the column headers or the column header area will bring up the following context menu:



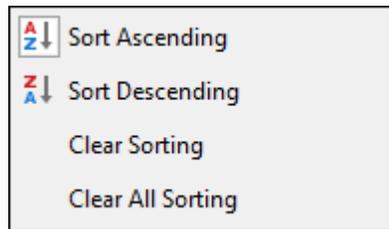
Sort Ascending/Sort Descending

You can sort columns in ascending or descending order by clicking on the **Sort Ascending** or **Sort Descending** buttons. The column header will then have an upward or downward arrow to indicate that the column is now sorted in ascending or descending order:



Total Volu...
=
694
719
728
752
761
763
764
765
766
769
774
793
798
804
816

To clear sorting right click again and then click **Clear Sorting** to clear the sorting for just that column or **Clear All Sorting** to clear sorting for all columns:



Group By This Column

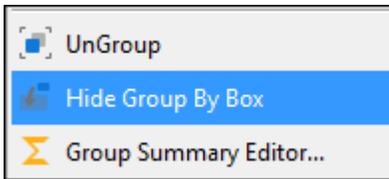
To group your data by a certain column, click **Group By This Column**, your data is then grouped and you can dropdown on one of the groupings to see all records that fall in that category:



Area										
Row	ID	Description	Long	Lat	Total Volume	Customers	A...	Selected	Actual Ge...	
=	=	bc	=	=	=	=	=	<input type="checkbox"/>	=	
<div style="background-color: #e0e0e0; padding: 2px;"> > Area: 1 </div> <div style="background-color: #e0e0e0; padding: 2px; margin-top: 10px;"> > Area: 2 </div> <div style="background-color: #e0e0e0; padding: 2px; margin-top: 10px;"> > Area: 3 </div> <div style="background-color: #e0e0e0; padding: 2px; margin-top: 10px;"> > Area: 4 </div>										

Area										
Row	ID	Description	Long	Lat	Total Volume	Customers	A...	Selected	Actual Ge...	
=	=	bc	=	=	=	=	=	<input type="checkbox"/>	=	
<div style="background-color: #e0e0e0; padding: 2px;"> v Area: 1 </div>										
60	61	Point59	28.3182355732341	-26.2199051084188	130	65	1	<input type="checkbox"/>	POINT(28.3...	
62	63	Point61	28.0513514416816	-26.2041216382733	486	243	1	<input type="checkbox"/>	POINT(28.0...	
63	64	Point62	28.0633086160344	-26.2782561192601	419	209.5	1	<input type="checkbox"/>	POINT(28.0...	
64	65	Point63	28.0303068148209	-26.3146059292923	413	206.5	1	<input type="checkbox"/>	POINT(28.0...	
65	66	Point64	28.0417857021995	-26.3720003661853	997	498.5	1	<input type="checkbox"/>	POINT(28.0...	
66	67	Point65	28.1034847218595	-26.4054804543729	608	304	1	<input type="checkbox"/>	POINT(28.1...	
91	92	Point90	28.0716299236672	-26.295093813611	314	157	1	<input type="checkbox"/>	POINT(28.0...	
92	93	Point91	28.080427746841	-26.289717366116	612	306	1	<input type="checkbox"/>	POINT(28.0...	
93	94	Point92	28.0647871723099	-26.2789644711259	340	170	1	<input type="checkbox"/>	POINT(28.0...	
94	95	Point93	28.0608770286771	-26.2814083108963	450	225	1	<input type="checkbox"/>	POINT(28.0...	
95	96	Point94	28.0584331889066	-26.2789644711259	774	387	1	<input type="checkbox"/>	POINT(28.0...	
126	127	Point125	28.0408375425592	-26.370852846496	673	336.5	1	<input type="checkbox"/>	POINT(28.0...	
127	128	Point126	28.0427926143755	-26.3723191503583	904	452	1	<input type="checkbox"/>	POINT(28.0...	

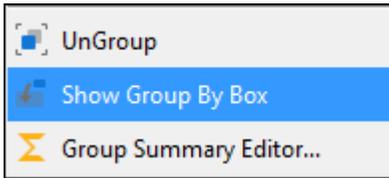
The **Hide Group By Box** button will hide the grouping area:



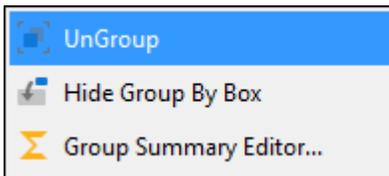
Area ▾										
Row	ID	Description	Long	Lat	Total Volume	Customers	Area ▾	Selected	• Actual Ge...	
▾	=	=	abc	=	=	=	=	<input type="checkbox"/>	=	
▸	> Area: 1									
	> Area: 2									
	> Area: 3									
	> Area: 4									

Row	ID	Description	Long	Lat	Total Volume	Customers	Area ▾	Selected	• Actual Ge...	
▾	=	=	abc	=	=	=	=	<input type="checkbox"/>	=	
▸	> Area: 1									
	> Area: 2									
	> Area: 3									
	> Area: 4									

To unhide just right click again and click the **Show Group By Box**:

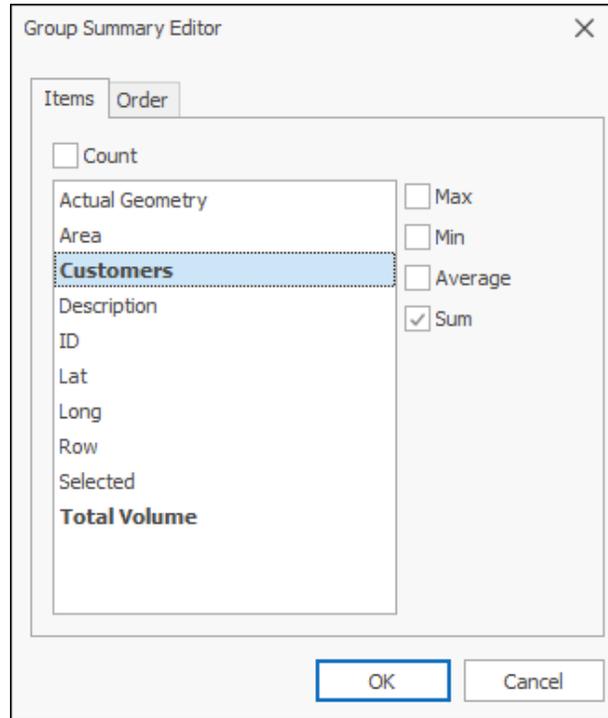
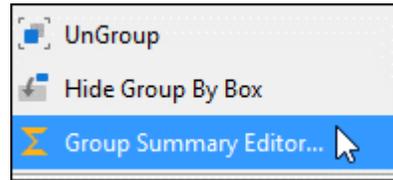


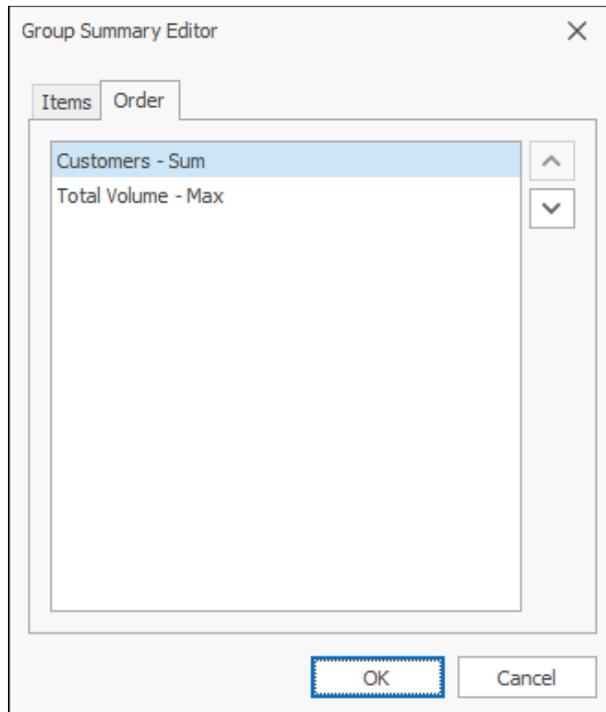
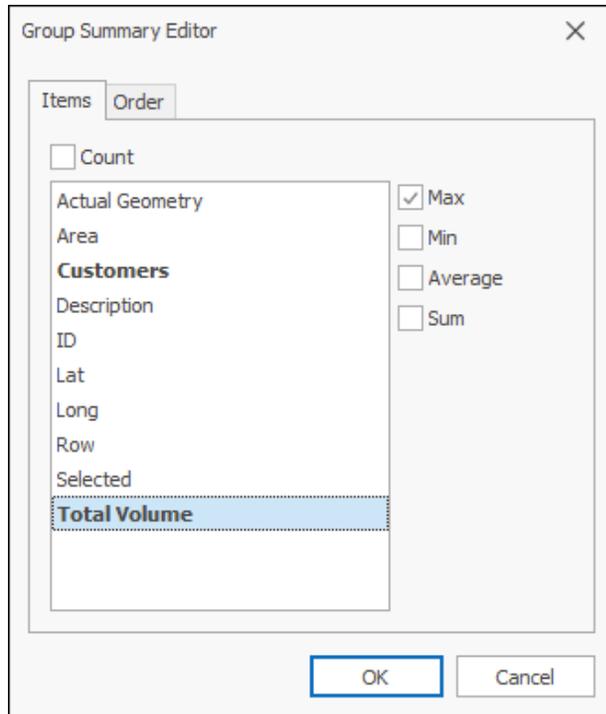
To ungroup you can right click again in the appropriate column header and click **Ungroup** (you can also just drag the column header out of the grouping area back to the grid and this will ungroup it too):



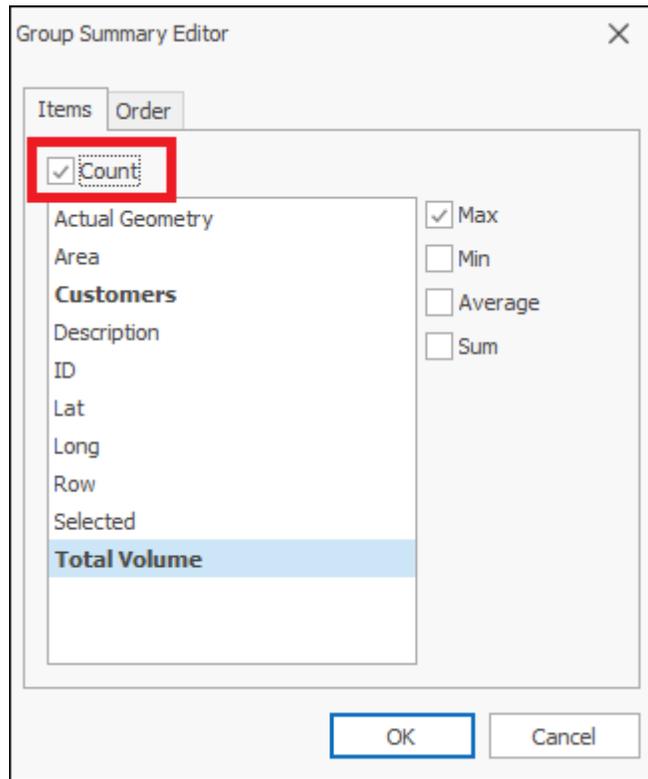
Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected	Actual Ge...
=	=	bc	=	=	=	=	=	<input type="checkbox"/>	=
Area: 1									
Area: 2									
Area: 3									
Area: 4									

Group Summary Editor will bring up a dialogue where you can add some calculations to your grouping setup, here I chose to have the **Sum of Customers** shown and the **Max Total Volume**, you can choose the order in which they are shown in the **Order** tab:





Ticking on **Count** will also include a count of the items:



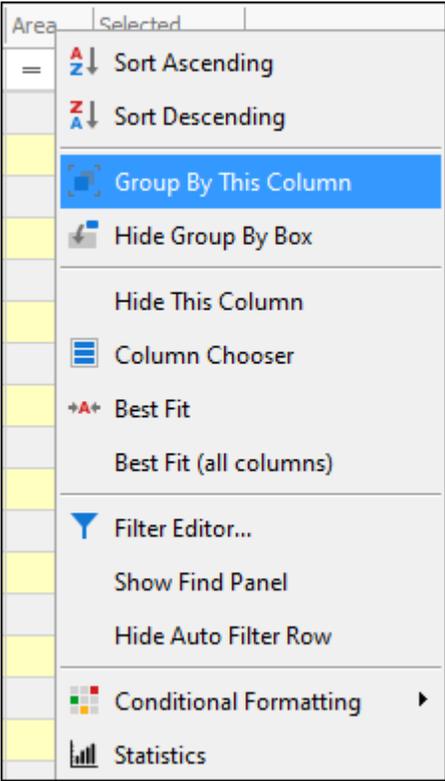
Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected	Actual Ge...
Area									
>	Area: 1 (Customers: SUM=5067.5), (Total Volume: MAX=997), (Count=17)								
>	Area: 2 (Customers: SUM=6136), (Total Volume: MAX=980), (Count=23)								
>	Area: 3 (Customers: SUM=16261), (Total Volume: MAX=1000), (Count=63)								
>	Area: 4 (Customers: SUM=6760.5), (Total Volume: MAX=979), (Count=31)								

In grouping by columns, you are able to group by more than one column at once. You can start by grouping by one column and then all subsequent columns you

group will act as subgroupings, and as mentioned before, grouping can be done by either dragging and dropping column headers in the grouping area, or by right clicking on the column header and choosing **Group By This Column**:

Row	ID	Description	Long	Lat	Total Volume	Customers	Area
=	=	BC	=	=	=	=	=
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2

or



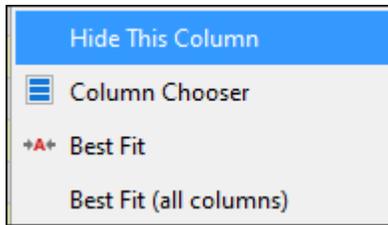
In this example I have grouped by two columns, the first being **Area** and the second being **Description**:

Area		Description							
Row	ID	Descript...	Long	Lat	Total Volume	Customers	A...	Selected	
▼	=	=	hbc	=	=	=	=	=	<input type="checkbox"/>
▶	Area: 1								
	Area: 2								
	Area: 3								
	Area: 4								

When I dropdown on **Area 1** you see the second grouping:

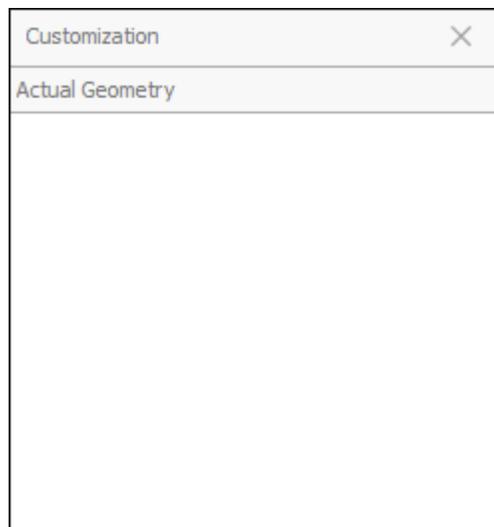
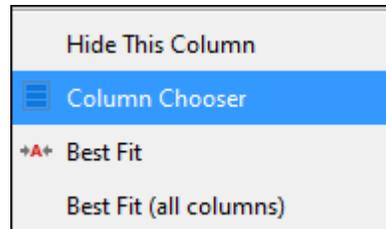
Area		Description							
Row	ID	Descript...	Long	Lat	Total Volume	Customers	A...	Selected	
▼	=	=	hbc	=	=	=	=	=	<input type="checkbox"/>
▶	Area: 1								
	Description: Point125								
	Description: Point126								
	Description: Point127								
	Description: Point128								
	Description: Point129								

You can choose to hide columns by right clicking in the appropriate column header and selecting **Hide Column**:



Column Chooser

Column Chooser will bring up a dialogue where you can choose which columns to have shown and which to have hidden by dragging and dropping columns into it that you want hidden, and double clicking on columns inside it to have them shown:

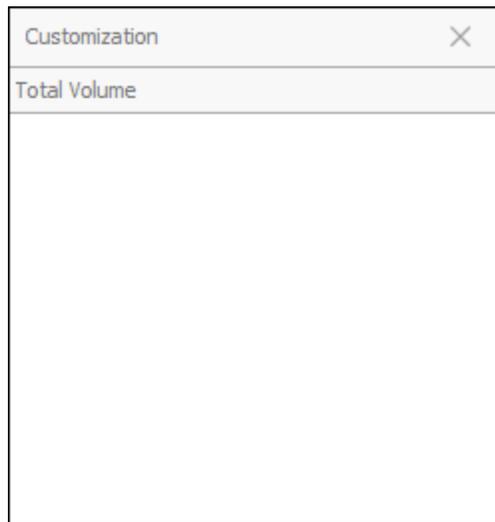


As you can see the **Actual Geometry** column is in this box which means it is hidden and if I want to show it, I double click on it and now it is part of my grid:

Drag a column header here to group by that column

Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected	Actual Geom...
4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3	<input type="checkbox"/>	POINT(28.1...
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	<input checked="" type="checkbox"/>	POINT(28.1...
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>	POINT(28.1...
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	<input type="checkbox"/>	POINT(28.1...
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	<input type="checkbox"/>	POINT(28.1...
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	<input type="checkbox"/>	POINT(28.1...
10	11	Point9	28.1972289687847	-26.3179539381111	765	267	3	<input type="checkbox"/>	POINT(28.1...
11	12	Point10	28.189576377199	-26.2916481545351	1000	500	3	<input type="checkbox"/>	POINT(28.1...
12	13	Point11	28.207272995241	-26.291169867561	464	232	3	<input type="checkbox"/>	POINT(28.2...
13	14	Point12	28.2268827611794	-26.291169867561	134	67	3	<input type="checkbox"/>	POINT(28.2...
14	15	Point13	28.2264044742053	-26.2715601016225	608	304	3	<input type="checkbox"/>	POINT(28.2...
15	16	Point14	28.2139690128785	-26.2696469537261	839	419.5	3	<input type="checkbox"/>	POINT(28.2...
16	17	Point15	28.2125341519562	-26.2629509360886	996	498	3	<input type="checkbox"/>	POINT(28.2...
17	18	Point16	28.2048815603704	-26.2266011260564	582	291	3	<input type="checkbox"/>	POINT(28.2...
18	19	Point17	28.2015335515517	-26.2266011260564	381	190.5	3	<input type="checkbox"/>	POINT(28.2...
19	20	Point18	28.163270593623	-26.238080013435	570	285	2	<input type="checkbox"/>	POINT(28.1...

If I want to hide my **Total Volume** column I just drag it and drop it in this box:



And it is now no longer showing in my grid:

Drag a column header here to group by that column

Row	ID	Description	Long	Lat	Customers	Area	Selected	Actual Geom...
2	3	Point1	28.1537048541408	-26.3059967637583	347	2	<input type="checkbox"/>	POINT(28.1...
3	4	Point2	28.1723580461311	-26.3169973641628	413	3	<input type="checkbox"/>	POINT(28.1...
4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	<input type="checkbox"/>	POINT(28.1...
5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	<input type="checkbox"/>	POINT(28.1...
6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	<input type="checkbox"/>	POINT(28.1...
7	8	Point6	28.1427042537364	-26.348564304454	382	2	<input type="checkbox"/>	POINT(28.1...
8	9	Point7	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>	POINT(28.1...
9	10	Point8	28.1910112381213	-26.3456945826093	267	3	<input type="checkbox"/>	POINT(28.1...
10	11	Point9	28.1972289687847	-26.3179539381111	267	3	<input type="checkbox"/>	POINT(28.1...
11	12	Point10	28.189576377199	-26.2916481545351	500	3	<input type="checkbox"/>	POINT(28.1...
12	13	Point11	28.207272995241	-26.291169867561	232	3	<input type="checkbox"/>	POINT(28.2...
13	14	Point12	28.2268827611794	-26.291169867561	67	3	<input type="checkbox"/>	POINT(28.2...
14	15	Point13	28.2264044742053	-26.2715601016225	304	3	<input type="checkbox"/>	POINT(28.2...
15	16	Point14	28.2139690128785	-26.2696469537261	419.5	3	<input type="checkbox"/>	POINT(28.2...
16	17	Point15	28.2125341519562	-26.2629509360886	498	3	<input type="checkbox"/>	POINT(28.2...
17	18	Point16	28.2048815603704	-26.2266011260564	291	3	<input type="checkbox"/>	POINT(28.2...

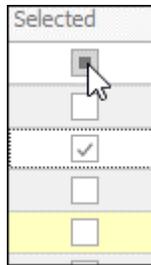
Another easy way to hide a column from your grid that you don't want showing is to simply drag it all the way to the ribbon area of the Layer Data Grid until a cross symbol shows and then just drop it:

The screenshot shows the 'Layer Data: Points' window with the ribbon menu. The 'Area' column header is being dragged from the grid to the 'Output' section of the ribbon, where a red box highlights the 'Area' button with a large 'X' over it, indicating that the column is being hidden.

Row	ID	D...	Long	Lat	Customers	Area	Selected
2	3	P...	28.1537048541408	-26.3059967637583	347	2	<input type="checkbox"/>
3	4	P...	28.1723580461311	-26.3169973641628	413	3	<input type="checkbox"/>
4	5	P...	28.16757517639	-26.3284762515414	234.5	3	<input type="checkbox"/>
5	6	P...	28.1393562449176	-26.3193887990334	324.5	2	<input type="checkbox"/>
6	7	P...	28.1398345318917	-26.3313459733861	172.5	2	<input type="checkbox"/>
7	8	P...	28.1427042537364	-26.348564304454	382	2	<input type="checkbox"/>
8	9	P...	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>
9	10	P...	28.1910112381213	-26.3456945826093	267	3	<input type="checkbox"/>
10	11	P...	28.1972289687847	-26.3179539381111	267	3	<input type="checkbox"/>
11	12	P...	28.189576377199	-26.2916481545351	500	3	<input type="checkbox"/>
12	13	P...	28.207272995241	-26.291169867561	232	3	<input type="checkbox"/>
13	14	P...	28.2268827611794	-26.291169867561	67	3	<input type="checkbox"/>
14	15	P...	28.2264044742053	-26.2715601016225	304	3	<input type="checkbox"/>
15	16	P...	28.2139690128785	-26.2696469537261	419.5	3	<input type="checkbox"/>
16	17	P...	28.2125341519562	-26.2629509360886	498	3	<input type="checkbox"/>
17	18	P...	28.2048815603704	-26.2266011260564	291	3	<input type="checkbox"/>

The **Selected** column is a column that you can choose to have showing in the grid that will show you with a tick what is selected in the scene currently, you can then also filter by clicking in the box above to have only unselected items showing and click again to have only selected items showing:

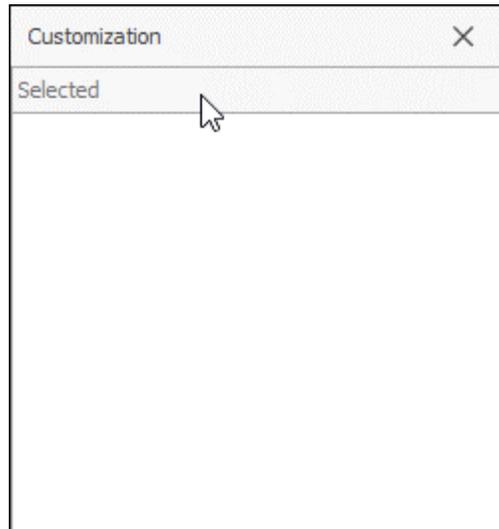
Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Actual Geom.	Selected
2	3	Point1	28.1537048541408	-26.3059967637583	694	348	2	POINT(28.1...	<input type="checkbox"/>
3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	POINT(28.1...	<input checked="" type="checkbox"/>
4	5	Point3	28.16757517639	-26.3284762515414	470	234.5	3	POINT(28.1...	<input type="checkbox"/>
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	POINT(28.1...	<input type="checkbox"/>
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	POINT(28.1...	<input type="checkbox"/>
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	POINT(28.1...	<input type="checkbox"/>
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	POINT(28.1...	<input type="checkbox"/>
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	POINT(28.1...	<input type="checkbox"/>



Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Actual Geom.	Selected
2	3	Point1	28.1537048541408	-26.3059967637583	694	348	2	POINT(28.1...	<input type="checkbox"/>
4	5	Point3	28.16757517639	-26.3284762515414	470	234.5	3	POINT(28.1...	<input type="checkbox"/>
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	POINT(28.1...	<input type="checkbox"/>
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	POINT(28.1...	<input type="checkbox"/>
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2	POINT(28.1...	<input type="checkbox"/>
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3	POINT(28.1...	<input type="checkbox"/>
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3	POINT(28.1...	<input type="checkbox"/>

Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Actual Geom.	Selected
3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	POINT(28.1...	<input checked="" type="checkbox"/>

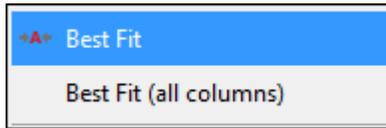
This column can be added via the **Column Chooser** box discussed above. Just double click on it here and it will show in your grid:



Best Fit

To optimally size columns right click in the appropriate column header and click **Best Fit**:

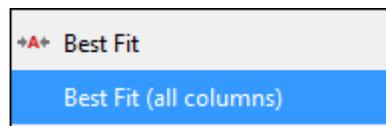
Row	ID	D...	long	Lat	Customers	Area	Selected
2	3	P...	28.1537048541408	-26.3059967637583	347	2	<input type="checkbox"/>
3	4	P...	28.1723580461311	-26.3169973641628	413	3	<input type="checkbox"/>
4	5	P...	28.16757517639	-26.3284762515414	234.5	3	<input type="checkbox"/>
5	6	P...	28.1393562449176	-26.3193887990334	324.5	2	<input type="checkbox"/>
6	7	P...	28.1398345318917	-26.3313459733861	172.5	2	<input type="checkbox"/>
7	8	P...	28.1427042537364	-26.348564304454	382	2	<input type="checkbox"/>
8	9	P...	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>
9	10	P...	28.1910112381213	-26.3456945826093	267	3	<input type="checkbox"/>
10	11	P...	28.1972289687847	-26.3179539381111	267	3	<input type="checkbox"/>
11	12	P...	28.189576377199	-26.2916481545351	500	3	<input type="checkbox"/>
12	13	P...	28.207272995241	-26.291169867561	232	3	<input type="checkbox"/>
13	14	P...	28.2268827611794	-26.291169867561	67	3	<input type="checkbox"/>
14	15	P...	28.2264044742053	-26.2715601016225	304	3	<input type="checkbox"/>
15	16	P...	28.2139690128785	-26.2696469537261	419.5	3	<input type="checkbox"/>
16	17	P...	28.2125341519562	-26.2629509360886	498	3	<input type="checkbox"/>
17	18	P...	28.2048815603704	-26.2266011260564	291	3	<input type="checkbox"/>



Drag a column header here to group by that column

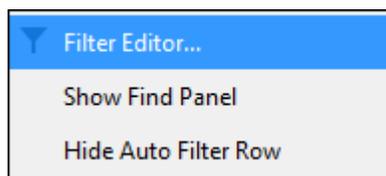
Row	ID	Description	Long	Lat	Customers	Area	Selected
2	3	Point1	28.1537048541408	-26.3059967637583	347	2	<input type="checkbox"/>
3	4	Point2	28.1723580461311	-26.3169973641628	413	3	<input type="checkbox"/>
4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	<input type="checkbox"/>
5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	<input type="checkbox"/>
6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	<input type="checkbox"/>
7	8	Point6	28.1427042537364	-26.348564304454	382	2	<input type="checkbox"/>
8	9	Point7	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>
9	10	Point8	28.1910112381213	-26.3456945826093	267	3	<input type="checkbox"/>
10	11	Point9	28.1972289687847	-26.3179539381111	267	3	<input type="checkbox"/>
11	12	Point10	28.189576377199	-26.2916481545351	500	3	<input type="checkbox"/>
12	13	Point11	28.207272995241	-26.291169867561	232	3	<input type="checkbox"/>
13	14	Point12	28.2268827611794	-26.291169867561	67	3	<input type="checkbox"/>
14	15	Point13	28.2264044742053	-26.2715601016225	304	3	<input type="checkbox"/>
15	16	Point14	28.2139690128785	-26.2696469537261	419.5	3	<input type="checkbox"/>
16	17	Point15	28.2125341519562	-26.2629509360886	498	3	<input type="checkbox"/>
17	18	Point16	28.2048815603704	-26.2266011260564	291	3	<input type="checkbox"/>

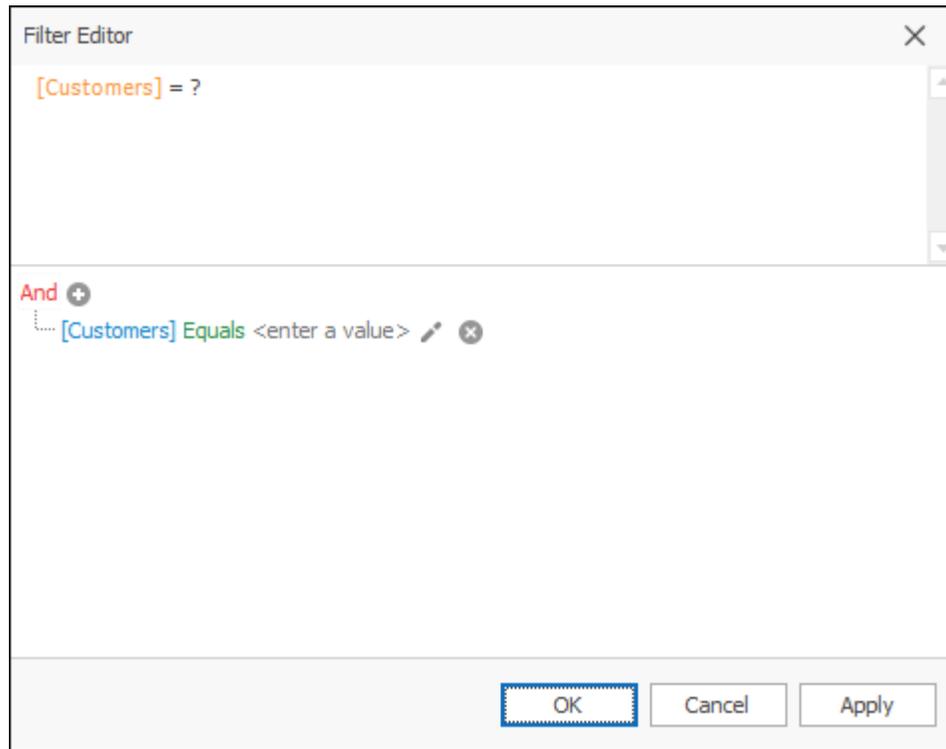
To do this for all columns click **Best Fit (all columns)**:



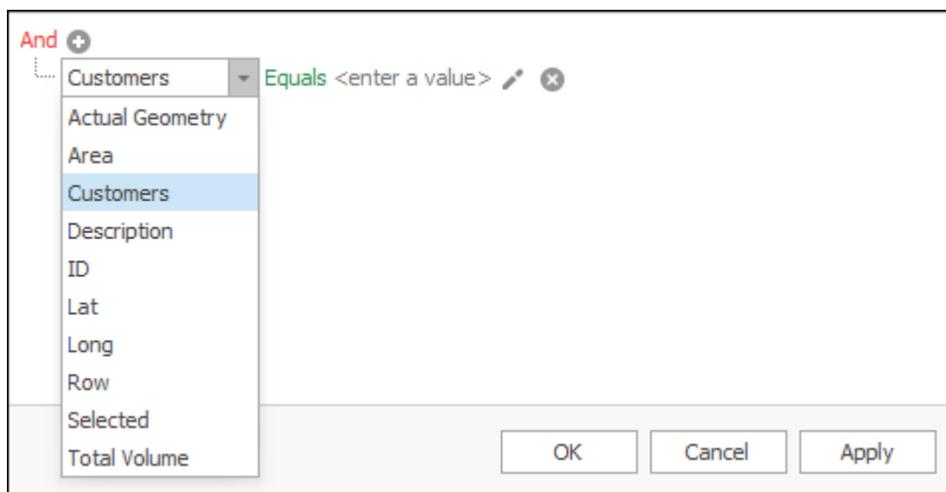
Filter Editor

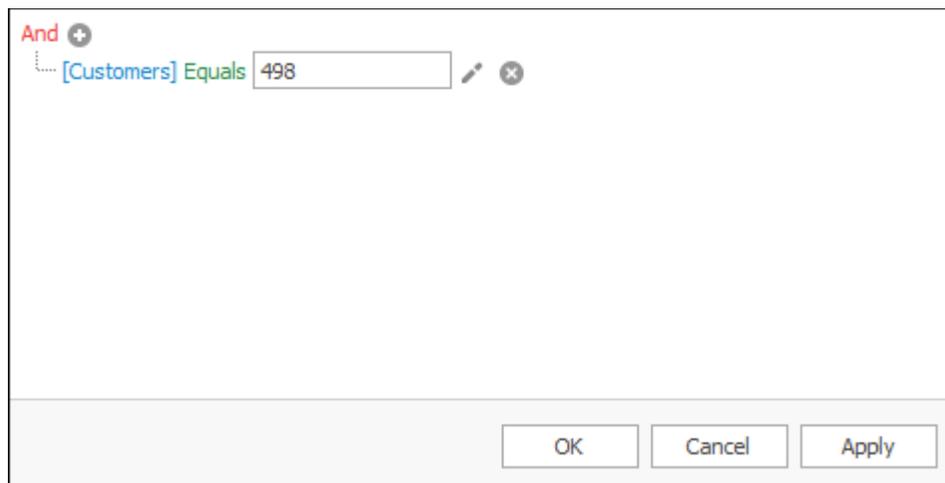
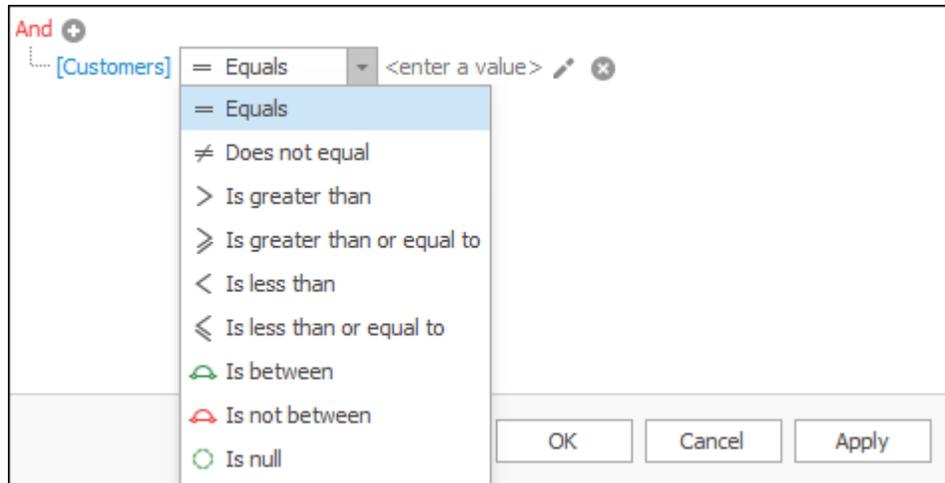
Filter Editor will bring up a dialogue where you can customize filters exactly as you want:



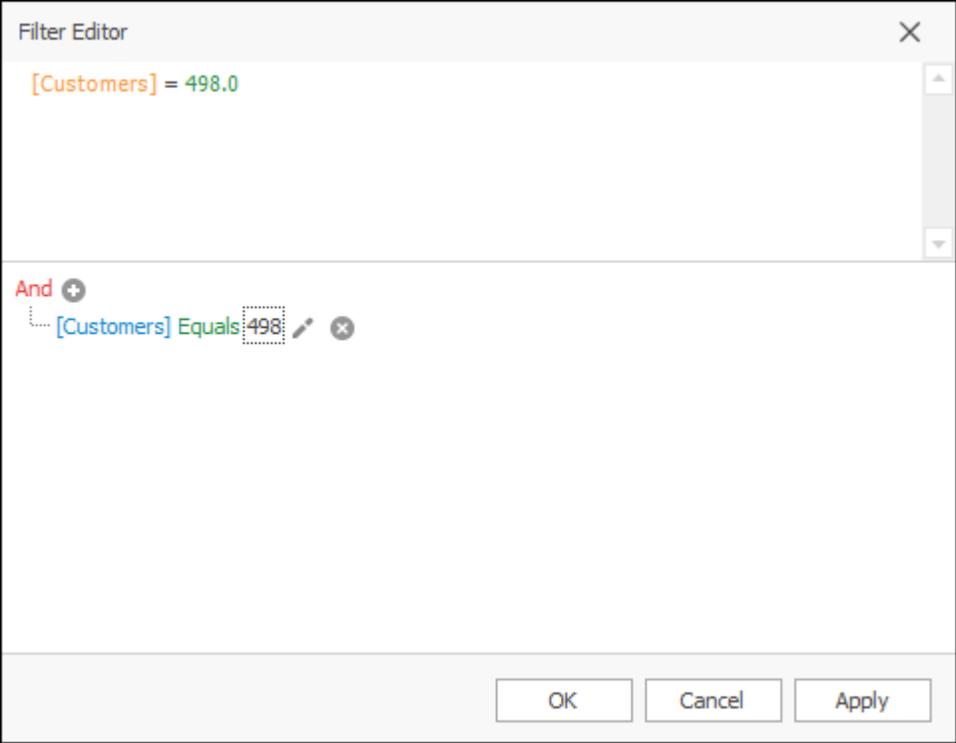


The top part shows the full expression for the filter you are specifying and the bottom part is where you specify the filter. Here (bottom part), click on any one of the elements to change them:

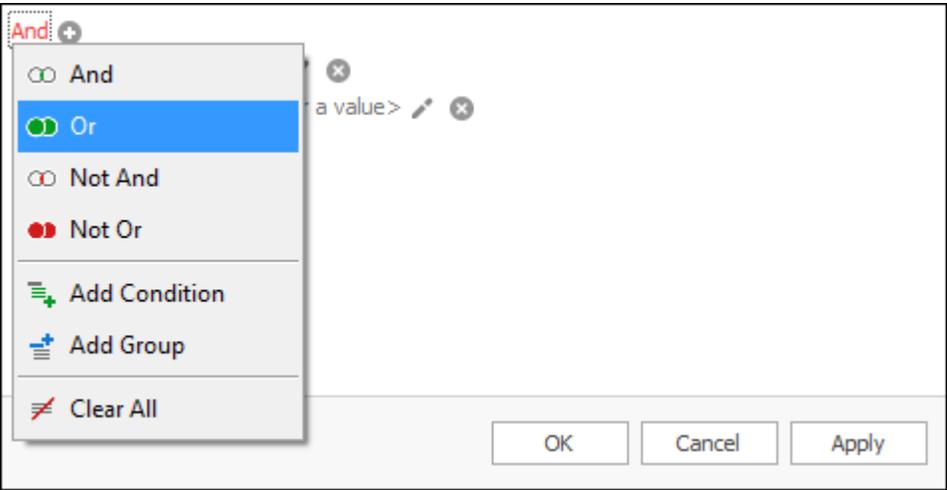


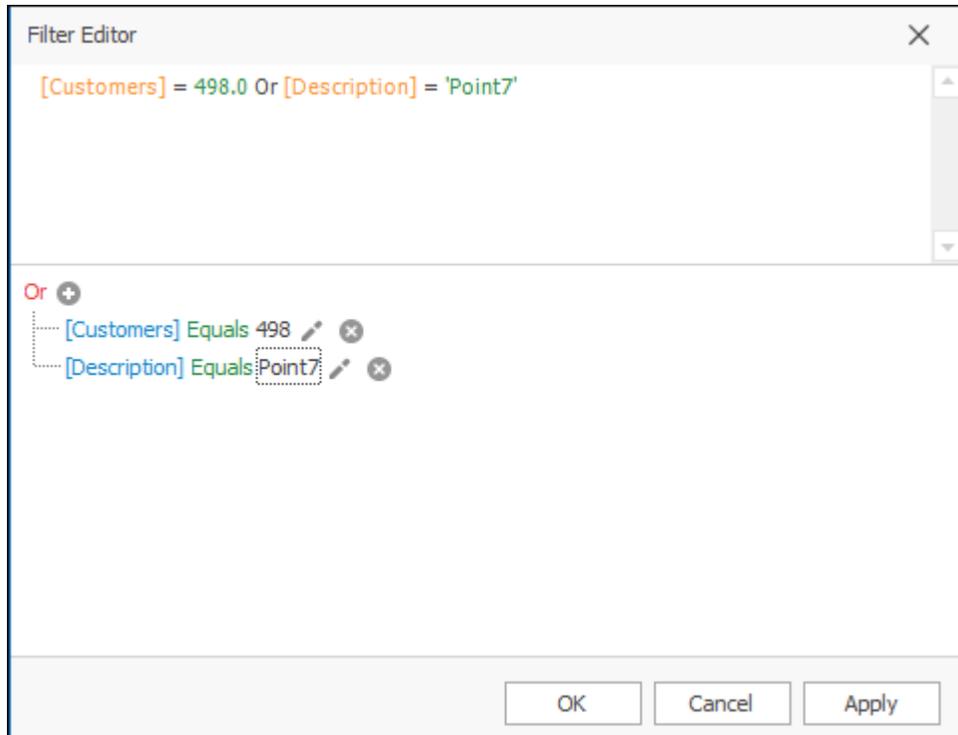


So, so far you can see I have made a filter which says **Customer** column is equal to 498:

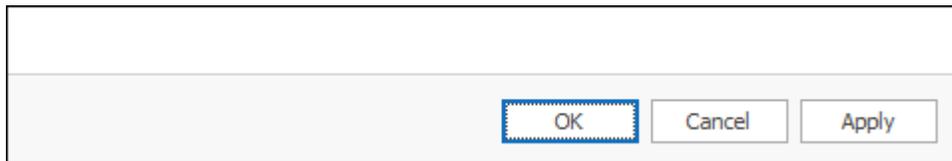


You can then add a new condition to this filter you are creating by clicking the plus symbol; if you want this to be an **And** condition then leave it as **And**, otherwise you can click on this and choose it to be any other type of condition. I will make it an **Or** condition:





And now as you can see here, I have made a filter which says **Customers** equals 498 **Or Description** equals Point7. I can then click **OK** (or **Apply** if I want to first see how the filter looks without exiting the window yet):



And this is the result of my customized filter:

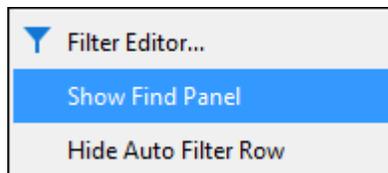
Drag a column header here to group by that column

Row	ID	Description	Long	Lat	Customers	Area	Selected
8	9	Point7	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>
16	17	Point15	28.2125341519562	-26.2629509360886	498	3	<input type="checkbox"/>

× [Customers] = '498' Or [Description] = 'Point7' Edit Filter

Show/Hide Find Panel

To show the Find Panel, which is where you can search the whole grid, select **Show Find Panel**:

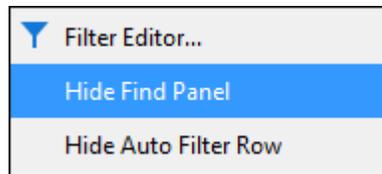


Drag a column header here to group by that column

X Enter text to search... Find

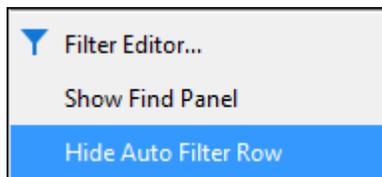
Row	ID	Description	Long	Lat	Customers	Area	Selected
2	3	Point1	28.1537048541408	-26.3059967637583	347	2	<input type="checkbox"/>
3	4	Point2	28.1723580461311	-26.3169973641628	413	3	<input type="checkbox"/>
4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	<input type="checkbox"/>
5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	<input type="checkbox"/>
6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	<input type="checkbox"/>
7	8	Point6	28.1427042537364	-26.348564304454	382	2	<input type="checkbox"/>
8	9	Point7	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>
9	10	Point8	28.1910112381213	-26.3456945826093	267	3	<input type="checkbox"/>
10	11	Point9	28.1972289687847	-26.3179539381111	267	3	<input type="checkbox"/>
11	12	Point10	28.189576377199	-26.2916481545351	500	3	<input type="checkbox"/>
12	13	Point11	28.207272995241	-26.291169867561	232	3	<input type="checkbox"/>
13	14	Point12	28.2268827611794	-26.291169867561	67	3	<input type="checkbox"/>
14	15	Point13	28.2264044742053	-26.2715601016225	304	3	<input type="checkbox"/>
15	16	Point14	28.2139690128785	-26.2696469537261	419.5	3	<input type="checkbox"/>

You can then right click again and select **Hide Find Panel** or simply click the **X** to hide it again:



Show/Hide Auto Filter Row

You can hide the auto filter row by selecting **Hide Auto Filter Row**:



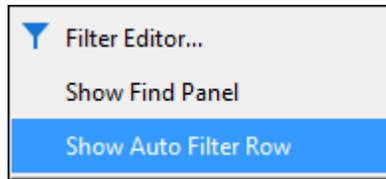
Drag a column header here to group by that column

	Row	ID	Description	Long	Lat	Customers	Area	Selected
▼	=	=	⌵	=	=	=	=	■
	2	3	Point1	28.1537048541408	-26.3059967637583	347	2	<input type="checkbox"/>
	3	4	Point2	28.1723580461311	-26.3169973641628	413	3	<input type="checkbox"/>
	4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	<input type="checkbox"/>
	7	8	Point6	28.1427042537364	-26.348564304454	382	2	<input type="checkbox"/>
	8	9	Point7	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>
	9	10	Point8	28.1910112381213	-26.3456945826093	267	3	<input type="checkbox"/>
	10	11	Point9	28.1972289687847	-26.3179539381111	267	3	<input type="checkbox"/>
	11	12	Point10	28.189576377199	-26.2916481545351	500	3	<input type="checkbox"/>
	12	13	Point11	28.207272995241	-26.291169867561	232	3	<input type="checkbox"/>
	13	14	Point12	28.2268827611794	-26.291169867561	67	3	<input type="checkbox"/>
	14	15	Point13	28.2264044742053	-26.2715601016225	304	3	<input type="checkbox"/>
	15	16	Point14	28.2139690128785	-26.2696469537261	419.5	3	<input type="checkbox"/>

Drag a column header here to group by that column

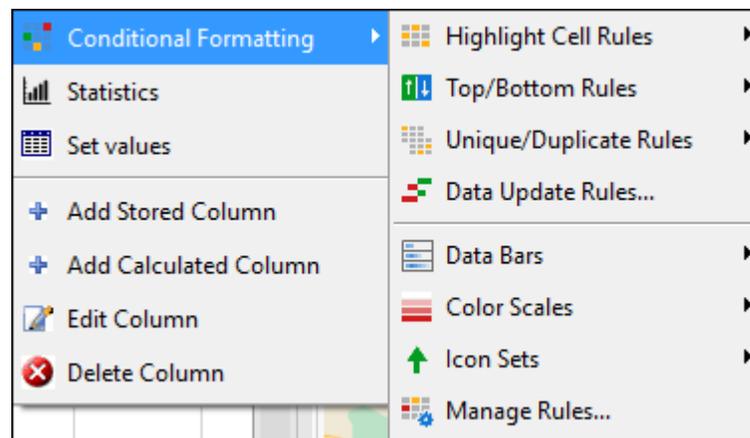
	Row	ID	Description	Long	Lat	Customers	Area	Selected
	2	3	Point1	28.1537048541408	-26.3059967637583	347	2	<input type="checkbox"/>
	3	4	Point2	28.1723580461311	-26.3169973641628	413	3	<input type="checkbox"/>
	4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	<input type="checkbox"/>
	7	8	Point6	28.1427042537364	-26.348564304454	382	2	<input type="checkbox"/>
	8	9	Point7	28.1728363331052	-26.3509557393245	128	3	<input type="checkbox"/>
	9	10	Point8	28.1910112381213	-26.3456945826093	267	3	<input type="checkbox"/>
	10	11	Point9	28.1972289687847	-26.3179539381111	267	3	<input type="checkbox"/>
	11	12	Point10	28.189576377199	-26.2916481545351	500	3	<input type="checkbox"/>
	12	13	Point11	28.207272995241	-26.291169867561	232	3	<input type="checkbox"/>
	13	14	Point12	28.2268827611794	-26.291169867561	67	3	<input type="checkbox"/>
	14	15	Point13	28.2264044742053	-26.2715601016225	304	3	<input type="checkbox"/>
	15	16	Point14	28.2139690128785	-26.2696469537261	419.5	3	<input type="checkbox"/>
	16	17	Point15	28.2125341519562	-26.2629509360886	498	3	<input type="checkbox"/>

To unhide, right click again and select **Show Auto Filter Row**:

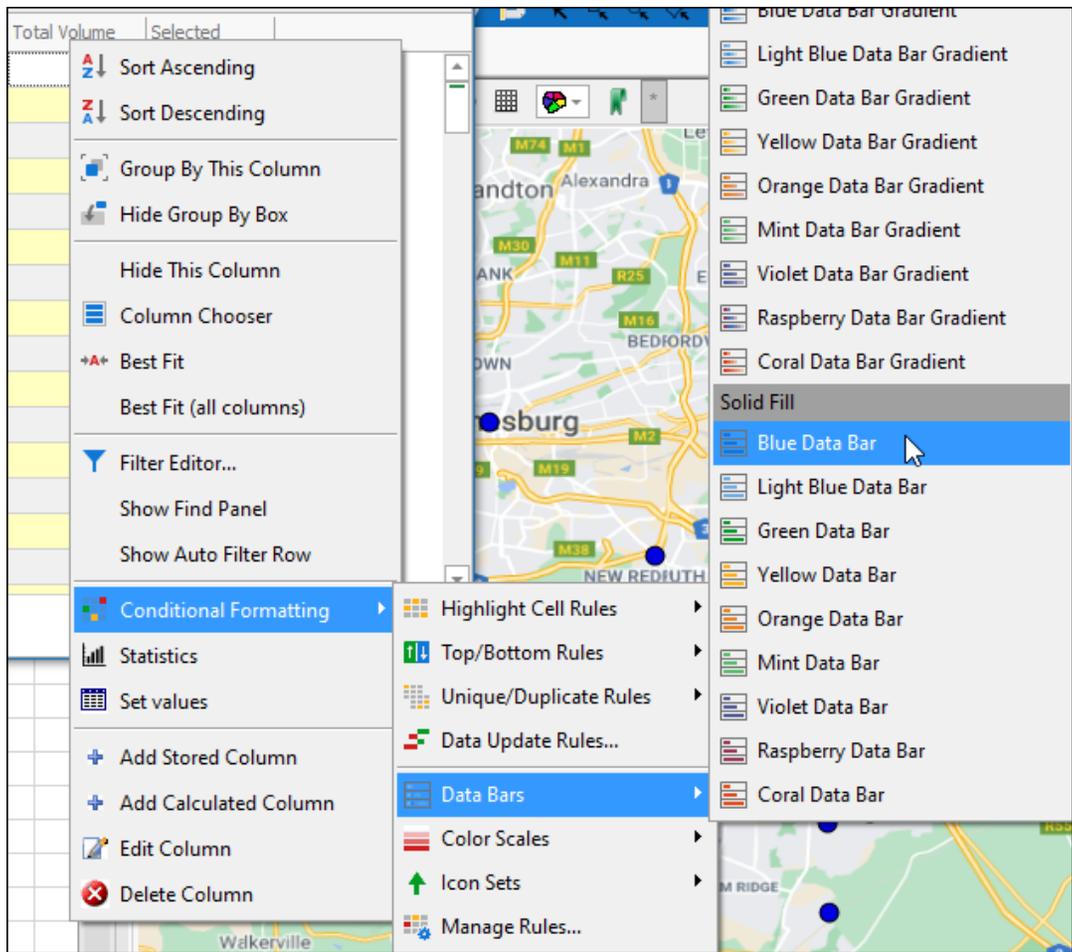


Conditional Formatting

With **Conditional Formatting** you can apply various formatting to your grid just like in Excel:



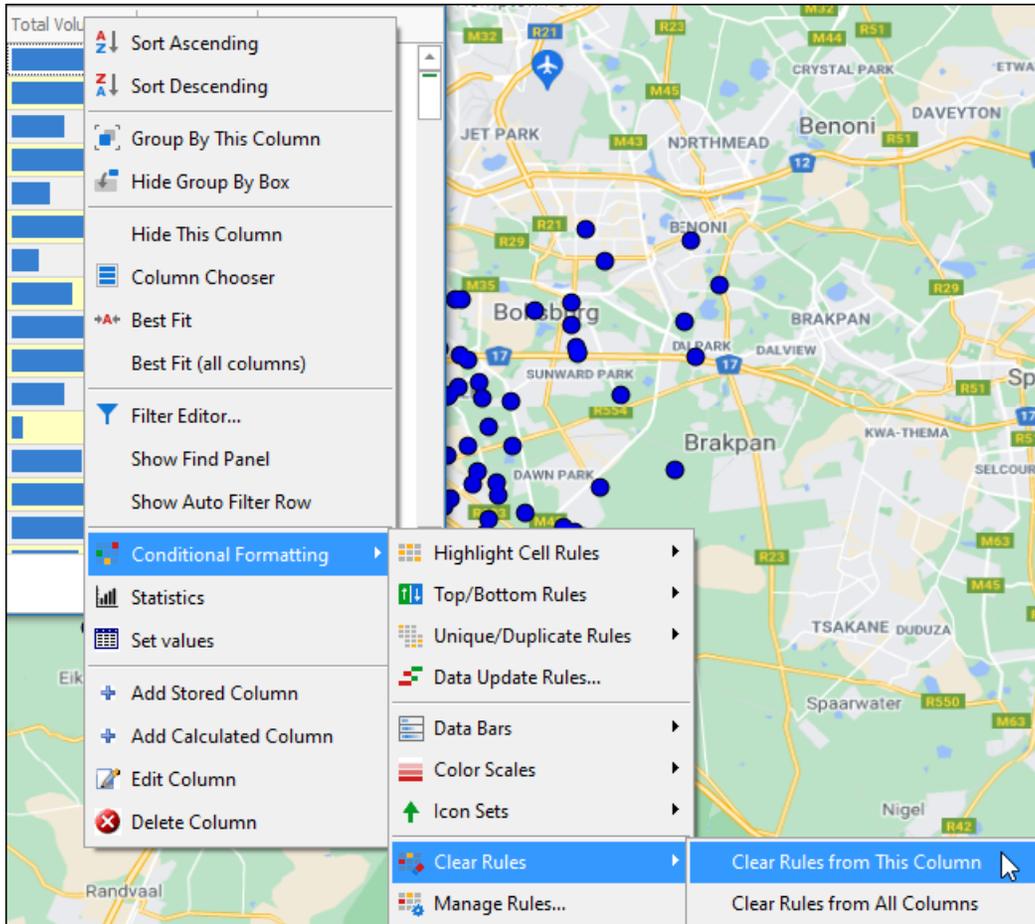
First right click in the column header of the column you would like to apply formatting to and then choose your desired formatting. As an example, here I will apply some **Data Bars** to my **Total Volume** column:



Drag a column header here to group by that column

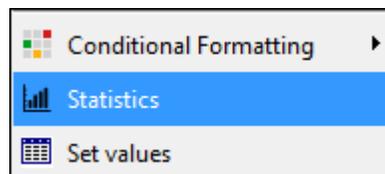
	Row	ID	Description	Long	Lat	Customers	Area	Total Volume	Selected
▶	2	3	Point1	28.1537048541408	-26.3059967637583	347	2	694	<input type="checkbox"/>
	3	4	Point2	28.1723580461311	-26.3169973641628	413	3	626	<input type="checkbox"/>
	4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	469	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	649	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	345	<input type="checkbox"/>
	7	8	Point6	28.1427042537364	-26.348564304454	382	2	764	<input type="checkbox"/>
	8	9	Point7	28.1728363331052	-26.3509557393245	128	3	256	<input type="checkbox"/>
	9	10	Point8	28.1910112381213	-26.3456945826093	267	3	534	<input type="checkbox"/>
	10	11	Point9	28.1972289687847	-26.3179539381111	267	3	765	<input type="checkbox"/>
	11	12	Point10	28.189576377199	-26.2916481545351	500	3	1000	<input type="checkbox"/>
	12	13	Point11	28.207272995241	-26.291169867561	232	3	464	<input type="checkbox"/>
	13	14	Point12	28.2268827611794	-26.291169867561	67	3	134	<input type="checkbox"/>
	14	15	Point13	28.2264044742053	-26.2715601016225	304	3	608	<input type="checkbox"/>
	15	16	Point14	28.2139690128785	-26.2696469537261	419.5	3	839	<input type="checkbox"/>
	16	17	Point15	28.2125341519562	-26.2629509360886	498	3	996	<input type="checkbox"/>

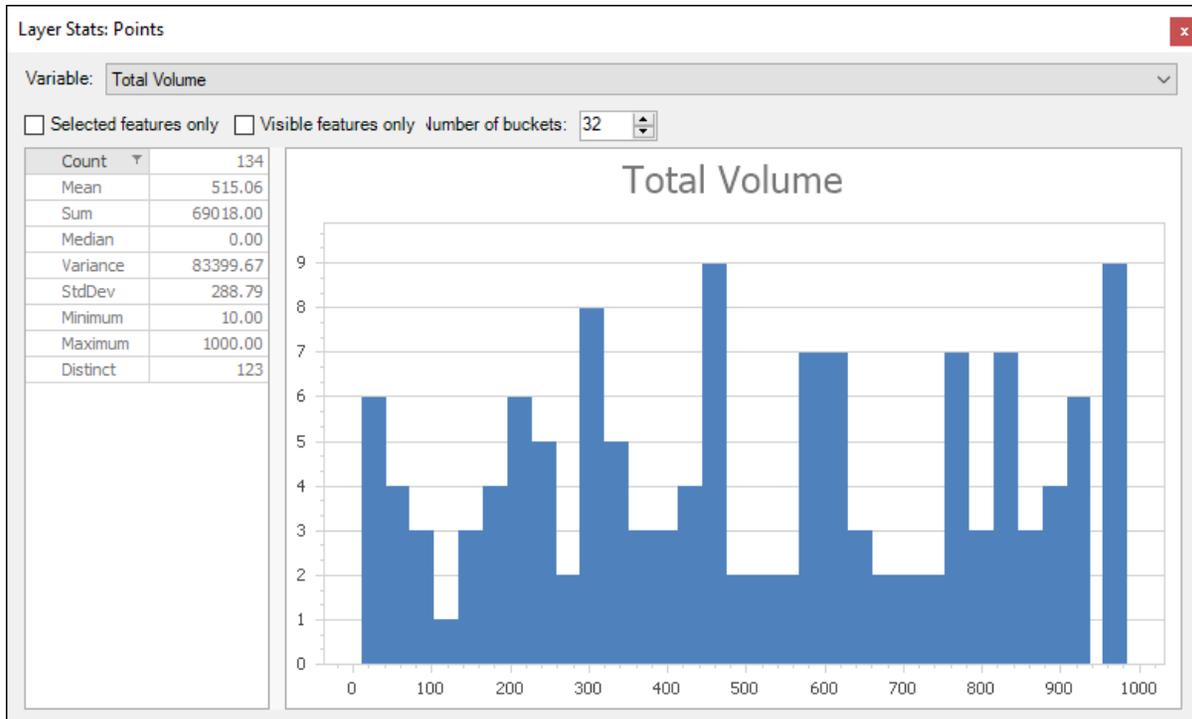
To clear any formatting once put, click **Clear Rules** and choose to clear formatting for just the column all for all columns:



Statistics

Statistics will take you to a dialogue with statistical data for that column. This tool is described fully in the [Compute Statistics for Layer](#) manual:





Set Values

Set Values will bring up a dialogue where you can set values for a number of rows. First select the rows and then select **Set Values**. Choose the column you will be setting values for and then enter in the value you would like to set it to (the amount of rows you selected is shown in the bottom left of the dialogue as well).

If you would like to set the values to null have **Null** ticked on. Then click **OK** and your values will be set:

Drag a column header here to group by that column

	Row	ID	Description	Long	Lat	Customers	Area	Total Volume	Selected
▶	2	3	Point1	28.1537048541408	-26.3059967637583	347	2	694	<input type="checkbox"/>
	3	4	Point2	28.1723580461311	-26.3169973641628	413	3	826	<input type="checkbox"/>
	4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	469	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	649	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	345	<input type="checkbox"/>

Set selected row values

Column to set: Total Volume

Value: 250 Null

2 rows selected

Drag a column header here to group by that column

	Row	ID	Description	Long	Lat	Customers	Area	Total Volume	Selected
▶	2	3	Point1	28.1537048541408	-26.3059967637583	347	2	250	<input type="checkbox"/>
	3	4	Point2	28.1723580461311	-26.3169973641628	413	3	250	<input type="checkbox"/>
	4	5	Point3	28.16757517639	-26.3284762515414	234.5	3	469	<input type="checkbox"/>
	5	6	Point4	28.1393562449176	-26.3193887990334	324.5	2	649	<input type="checkbox"/>
	6	7	Point5	28.1398345318917	-26.3313459733861	172.5	2	345	<input type="checkbox"/>

Add Stored Column

With **Add Stored Column** you are able to add a new column to your layer data grid. This will be a column that just holds values and doesn't change based on some calculation. Click on it and it will bring up the following dialogue:

- Add Stored Column
- Add Calculated Column
- Edit Column
- Delete Column

Column Properties

Column Properties Initial Values

Column Name:

Type: String

Width: 0

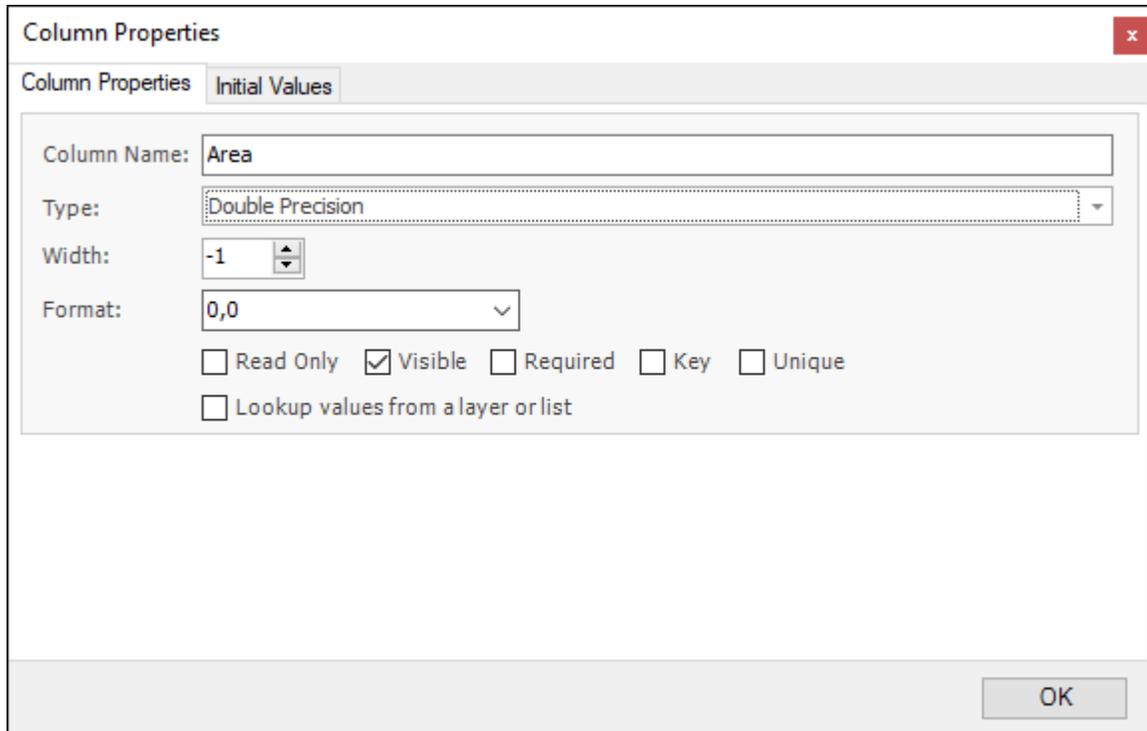
Format:

Read Only Visible Required Key Unique

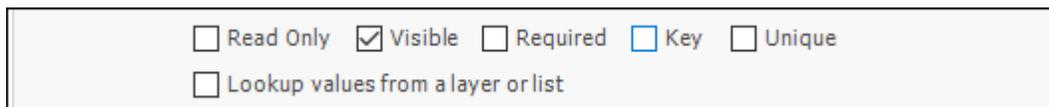
Lookup values from a layer or list

OK

By **Column Name** enter in the name for the new column. Then enter in the **Type** of the column whether String, Integer etc. You can then specify its **Width** if you wish. You can then choose the **Format** of the values:



Now, you also have various options you can tick on or off regarding this new column. Tick on **Read Only** to make column read only; When **Visible** is ticked on it means the column will show, if it is off the column will be hidden; **Required** will require that a value be in this column for each record and will not allow nulls. **Key** will make the column a unique key column and **Unique** will make it so that no duplicate values will be allowed in the column:



Ticking on **Lookup values from a layer or list** will bring up a dialogue where you can specify a layer or list from which you can lookup values and which will appear as a lookup table in the Layer Data Grid. To lookup values from a layer first choose the layer, then choose the value to be looked up and then choose the value to display. In this example I am adding a stored column called **Area** and I'm choosing to lookup values from my **Areas** layer and the value I am choosing to

lookup is the **SQkm** of the area and the value that will display is the **Description** of the area:

Column Properties

Column Properties Initial Values

Column Name: Area

Type: Double Precision

Width: -1

Format:

Read Only Visible Required Key Unique

Lookup values from a layer or list

From Layer From List

Lookup Layer: Areas

Value Column: SQkm

Display Column: Description

OK

When I now want to enter in data in this column there is a lookup table for me to choose from:

Total Volume	Area			
826	Area1			
469	Area2			
649	Area2			
345				
764		Geometry	ID	Description
256		POLYGON((27....	2	Area1
534		POLYGON((27....	3	Area2
765		POLYGON((28....	4	Area3
1000		POLYGON((28....	6	Area4
464				
134				

To lookup values from a list go to the **From List** tab and enter in the items in the list that will form a lookup table for you; the **Value** is the value the record will hold, the **Display** is what value will be displayed in the record and **Description** will just be in the lookup table as a description of the item:

Once you have finished setting the new column's properties you can click **OK** and the column is added; you can then enter in values in this column by typing or inserting from a lookup table you have specified:

Drag a column header here to group by that column

	Row	ID	Description	Long	Lat	Customers	Total Volume	Area
	2	3	Point1	28.1537048541408	-26.3059967637583	347	694	
	3	4	Point2	28.1723580461311	-26.3169973641628	413	826	
	4	5	Point3	28.16757517639	-26.3284762515414	234.5	469	
	5	6	Point4	28.1393562449176	-26.3193887990334	324.5	649	
	6	7	Point5	28.1398345318917	-26.3313459733861	172.5	345	

Now, when you are done specifying the properties of the new column and have clicked **OK**, the column will be added in your Layer Data Grid as an empty column that you can enter values into, however you are also able to initialize values for a new column in the **Initial Values** tab:

Column Properties

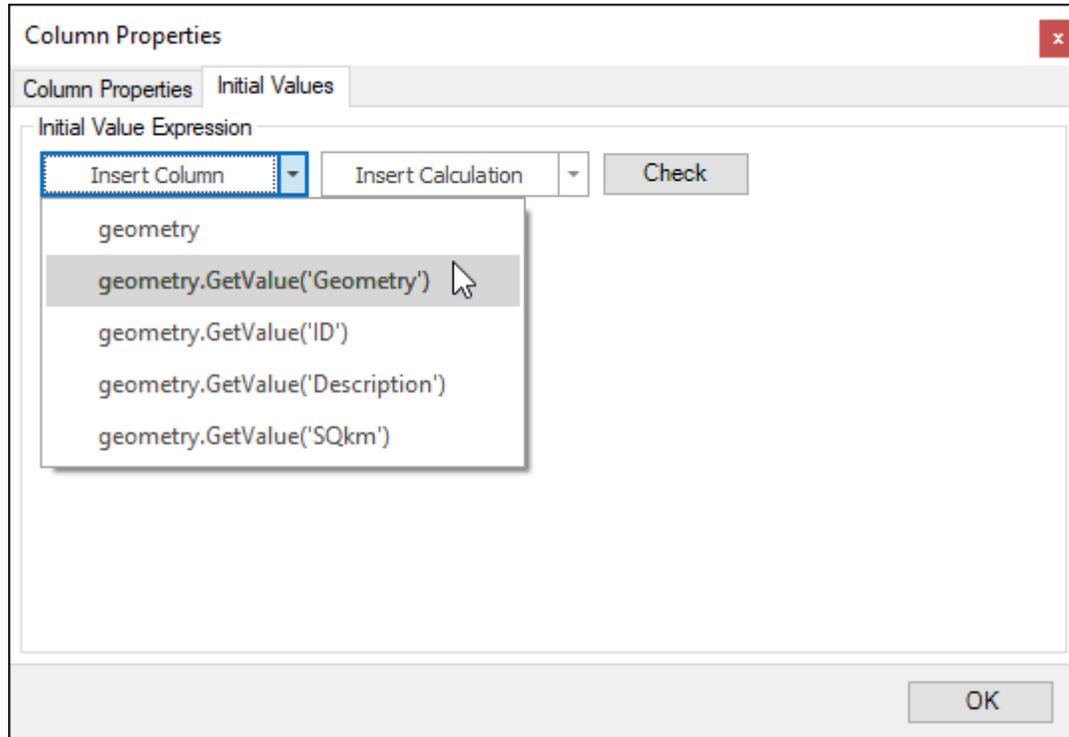
Column Properties Initial Values

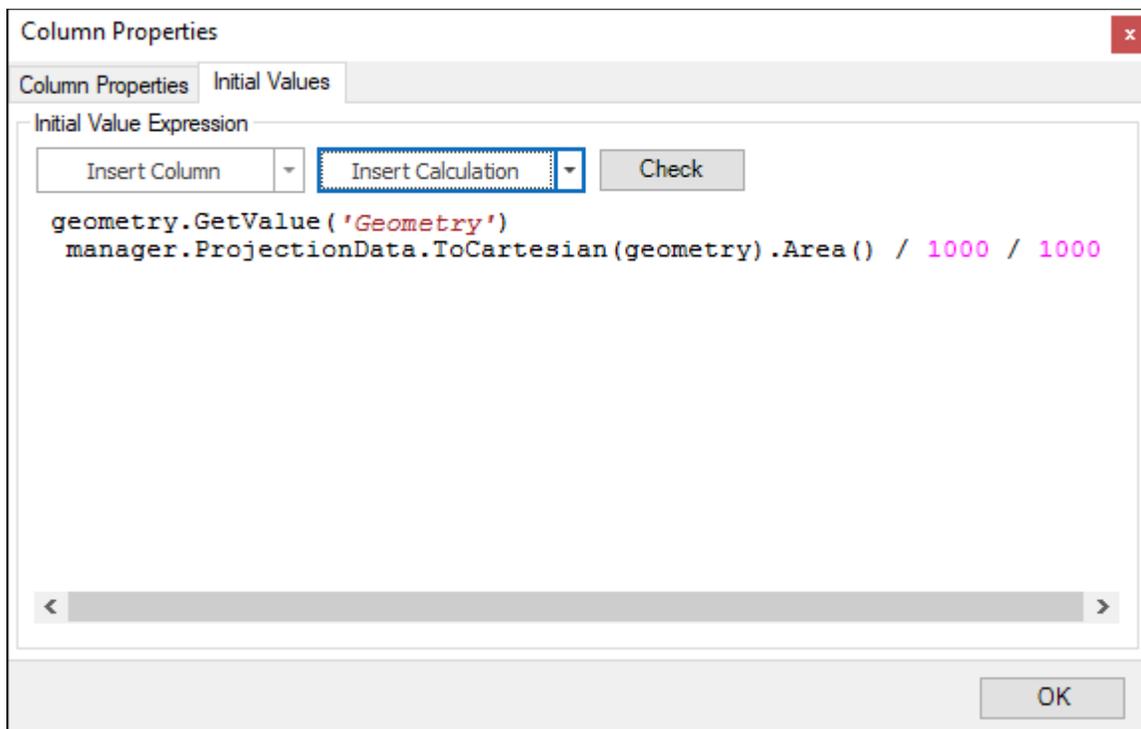
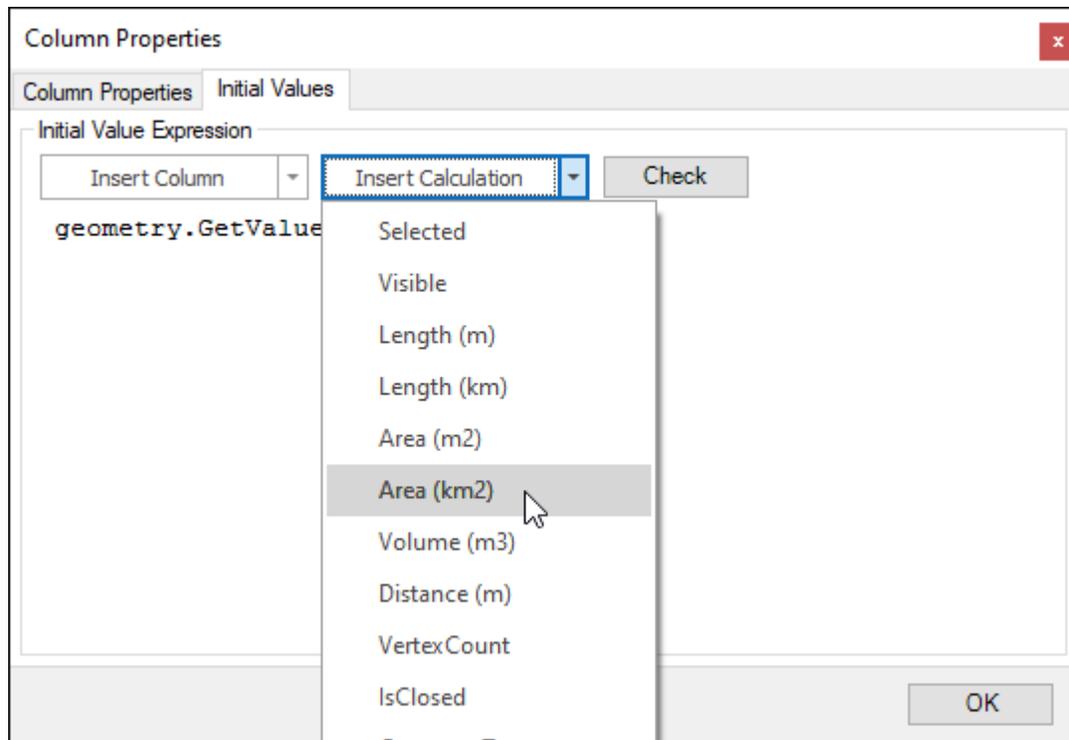
Initial Value Expression

Insert Column ▼ Insert Calculation ▼ Check

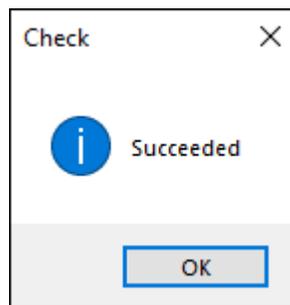
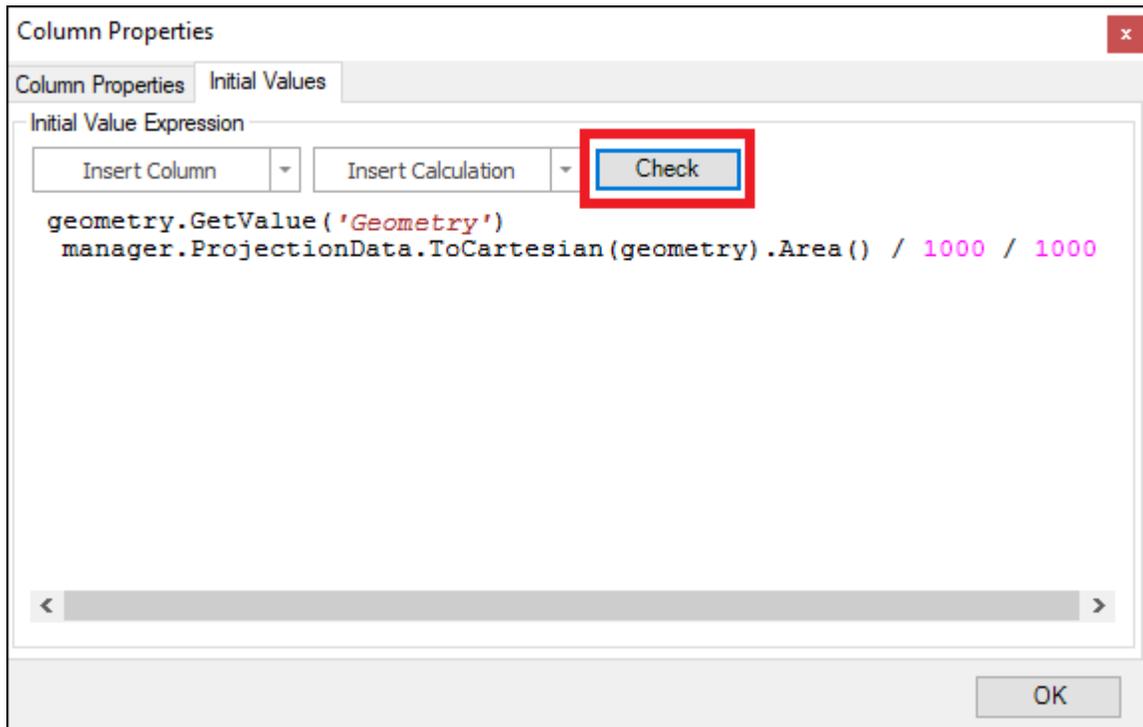
OK

By dropping down on **Insert Column** you can choose a column from the **Layer Data Grid** to insert in the expression to get values from; by dropping down on **Insert Calculation** you can then choose a predefined calculation to insert into the expression:





What I have said here is to get the geometries of the elements (which are polygons in this case) in this layer and then calculate the square kilometres of them. I can then click **Check** to see if this expression is correct and if so, it will let me know:



I can then click **OK** on this and the dialog and you will see a column, which I have called **SQkm**, has been added with the initialized values of the square kilometres of the elements:

Drag a column header here to group by that column

	ID	Description	Area
▼	=	Area	=
▶	0	Area1	223
	1	Area2	297
	2	Area3	100
	3	Area4	331

You can also add an **Image** type column when creating a stored column, this will allow you to store images for each record:

Column Properties

Column Properties Initial Values

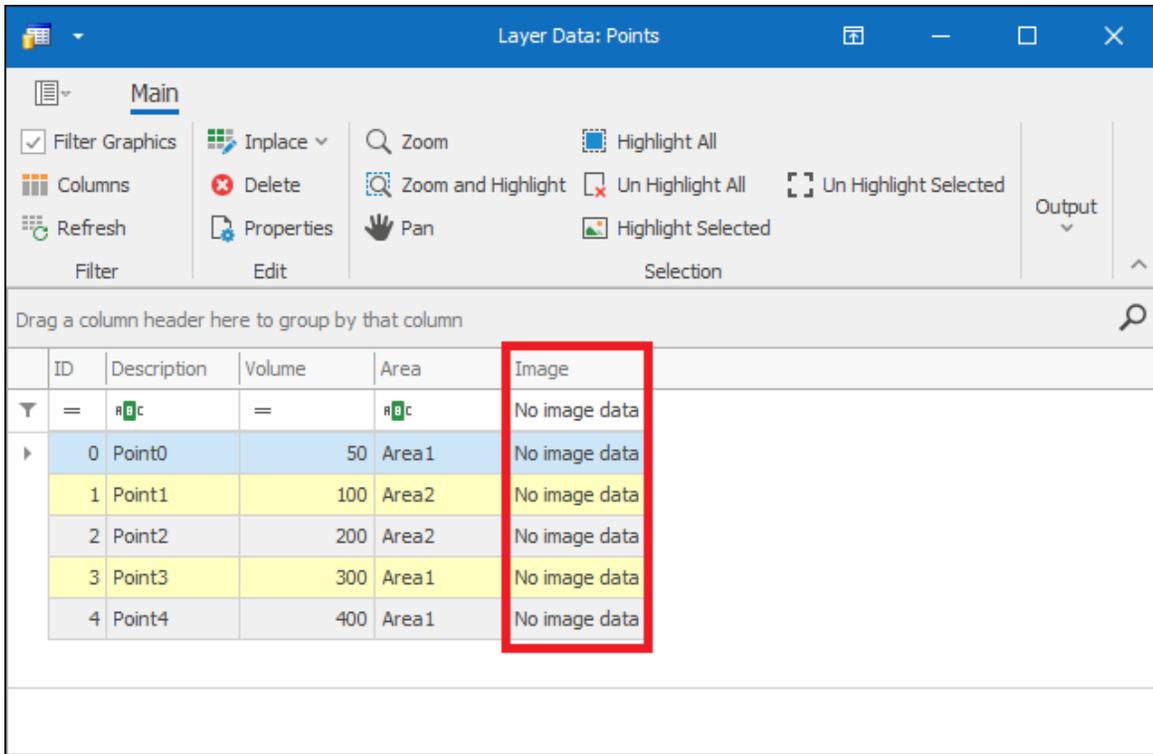
Column Name: Image

Type: String

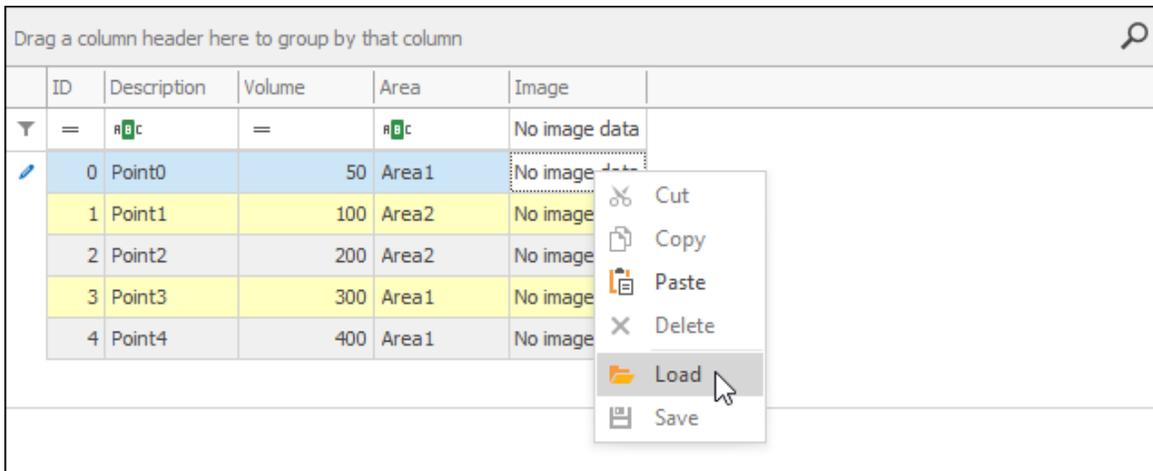
Width:

Format:

Name	Description	Type
Geometry	Geometry	PrimeThought.Spatial.G...
▶ Image	Picture	System.Drawing.Image
String	Any characters	System.String
Character	Single character	System.Char
Integer	Signed whole number	System.Int32
Long Integer	Large Signed whole nu...	System.Int64
Short Integer	Signed whole number	System.Int16
Small PositiveInteger	Small whole number 0 t...	System.Byte
Decimal	Fixed point point number	System.Decimal
Double Precision	Double precision floatin...	System.Double
Single Precision	Single precision floating...	System.Single



Click in one of the image fields and then right click to load an image:



Drag a column header here to group by that column					
	ID	Description	Volume	Area	Image
▼	=	abc	=	abc	No image data
✍	0	Point0	50	Area1	
	1	Point1	100	Area2	No image data
	2	Point2	200	Area2	No image data
	3	Point3	300	Area1	No image data
	4	Point4	400	Area1	No image data

Extracting Data from Columns

As you saw in the Initial Values tab of the Add Stored Column box, we use a script to insert a calculation for a column. This is JavaScript. Full documentation and tutorials on the JavaScript language and how to use it for various calculations and actions can be found on the <https://www.w3schools.com/> website.

One of the useful scripts you can use is for extracting out the various parts of a string of data within one column of your data so that they are split into separate columns.

For example, in the field of Mining, a user may have a file with a design of the mining area. There may be a column in the attribute data of that file that specifies the mining block ID, the material type and the strip number all in one string in one column.

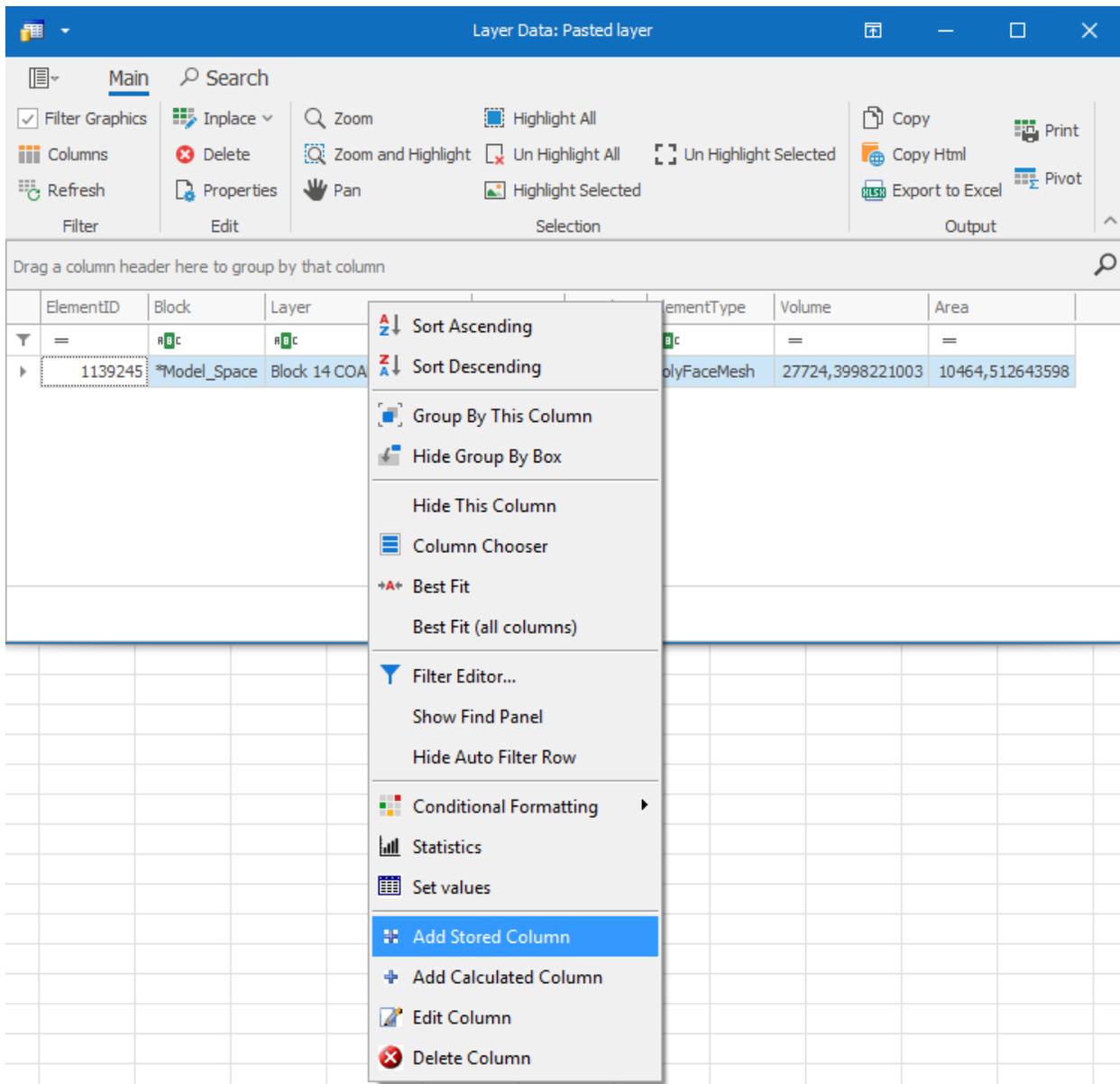
The screenshot shows a software window titled "Layer Data: Pasted layer". The interface includes a ribbon with tabs for "Main", "Filter", "Edit", "Selection", and "Output". The "Main" tab is active, showing options like "Filter Graphics", "Columns", "Refresh", "Inplace", "Delete", "Properties", "Zoom", "Zoom and Highlight", "Pan", "Highlight All", "Un Highlight All", "Un Highlight Selected", "Highlight Selected", "Copy", "Copy Html", "Export to Excel", "Print", and "Pivot". Below the ribbon is a search bar with the text "Drag a column header here to group by that column". The main area contains a table with the following data:

	ElementID	Block	Layer	EntityID	MSLink	ElementType	Volume	Area
	=	Block	Block	=	=	Block	=	=
▶	1139245	*Model_Space	Block 14 COAL Strip 26	0	0	PolyFaceMesh	27724,3998221003	10464,512643598

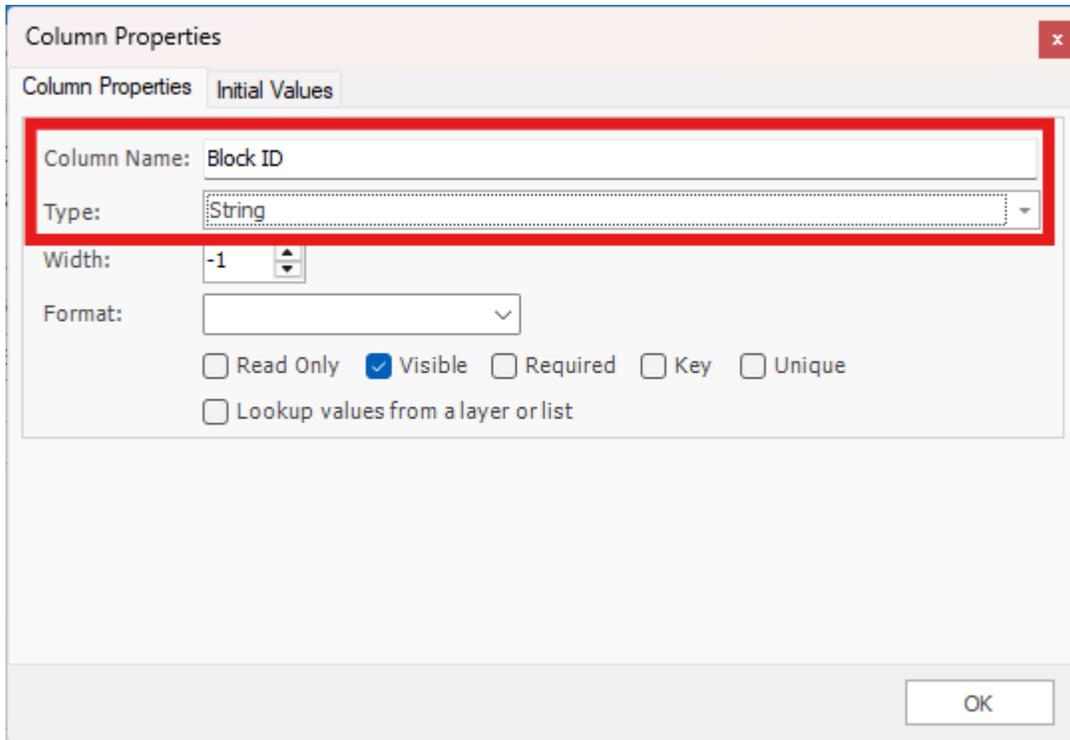
The user may want to split this data out so that they are in separate columns and he can then use these columns to filter his data by.

You can extract this data out in the following way.

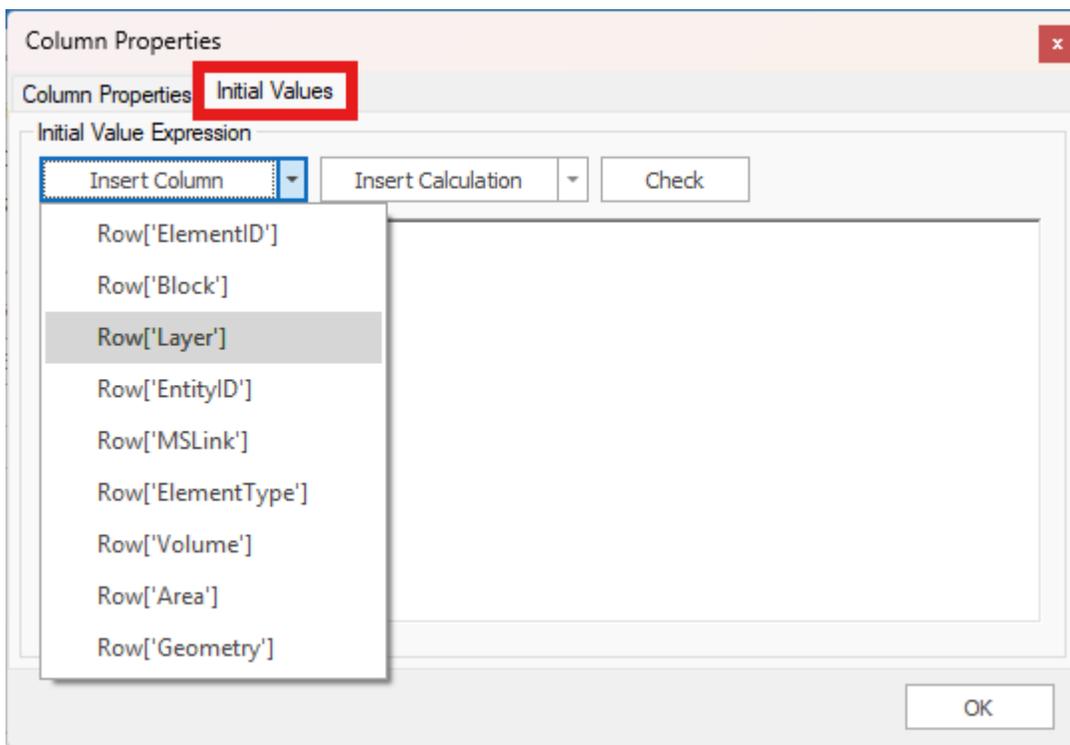
Right click in the column header area and select “Add Stored Column”:

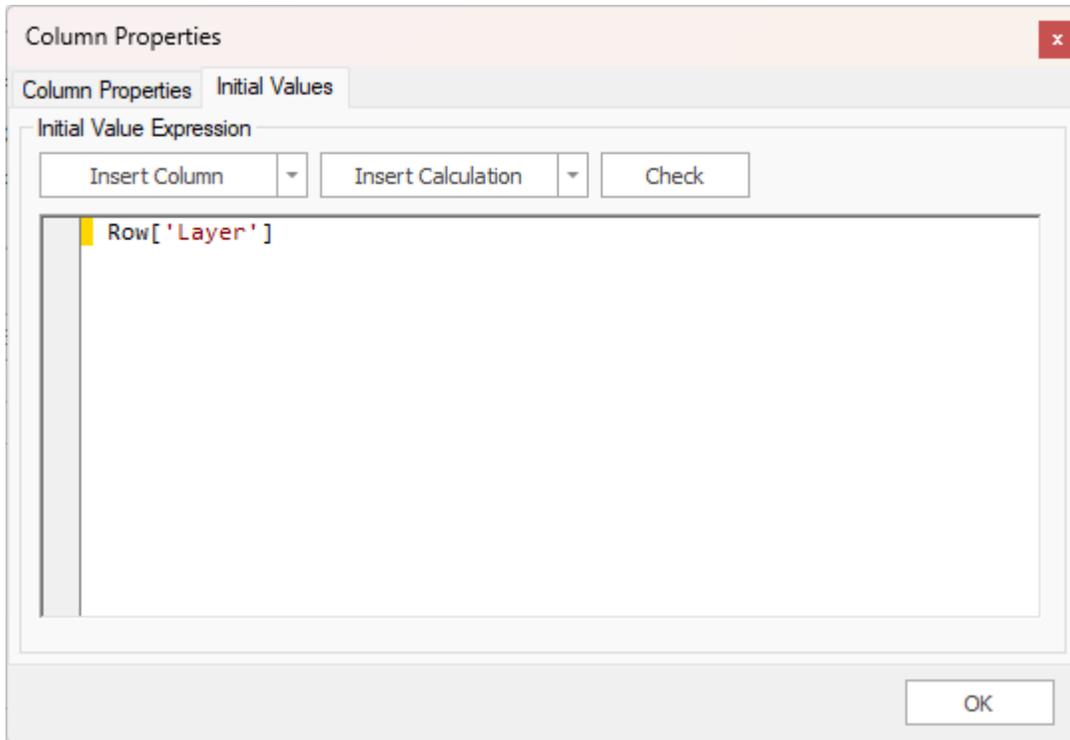


Give the column a name based on what information you will extract out from the existing column into this new column; in this example it is the Block ID. Make the column of type String:



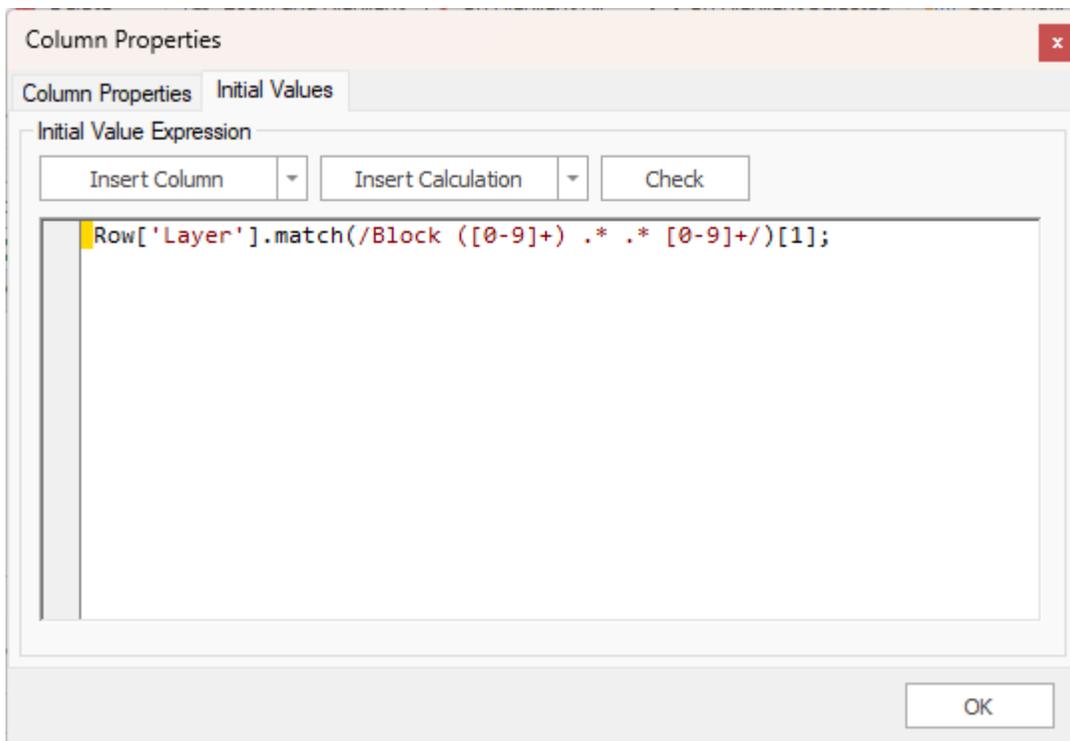
Go to the “Initial Values” tab, drop down on “Insert Column” and choose the column in your data that has the data you want to extract:





Then type in the following script after the layer name:

```
Row['Layer'].match(/Block ([0-9]+) .* .* [0-9]+)/[1];
```



What this script uses is regular expression language which helps you match strings so that you can then capture or extract parts of it.

A simple explanation of this particular script follows:

- **.match**: JavaScript function to do matching.
- **(/Block ([0-9]+) .* ([0-9]+)[1])**: Everything between the (/ and /) is the total thing to look for and match. Everything between the nested () is the part of the string to actually capture and extract.

So in this example it is going to look for the word “**Block**” and then a space and then a number between **[0-9]** repeated however many times (indicated by the +). It is also going to capture and extract this part as indicated by the nested brackets here: **([0-9]+)**. So this part is my block ID number that I will be extracting into my new column.



The **. .* [0-9]+** indicates the words “COAL” (First **. ***), followed by a space, and “Strip” (Second **. ***), also followed by a space. Finally, the **[0-9]+** indicates the strip number at the end of the original string, a number between **[0-9]** repeated however many times (indicated by the +).

In regular expression language, the period character (.) matches any single character, and the asterisk (*) matches any number of characters.

- **[1]**: The [1] at the end of the whole script just indicates that it must return the second thing matched, which is the part in nested brackets (), and not the rest of the match. In programming, 0 is the first thing in a list and 1 would be the second thing.

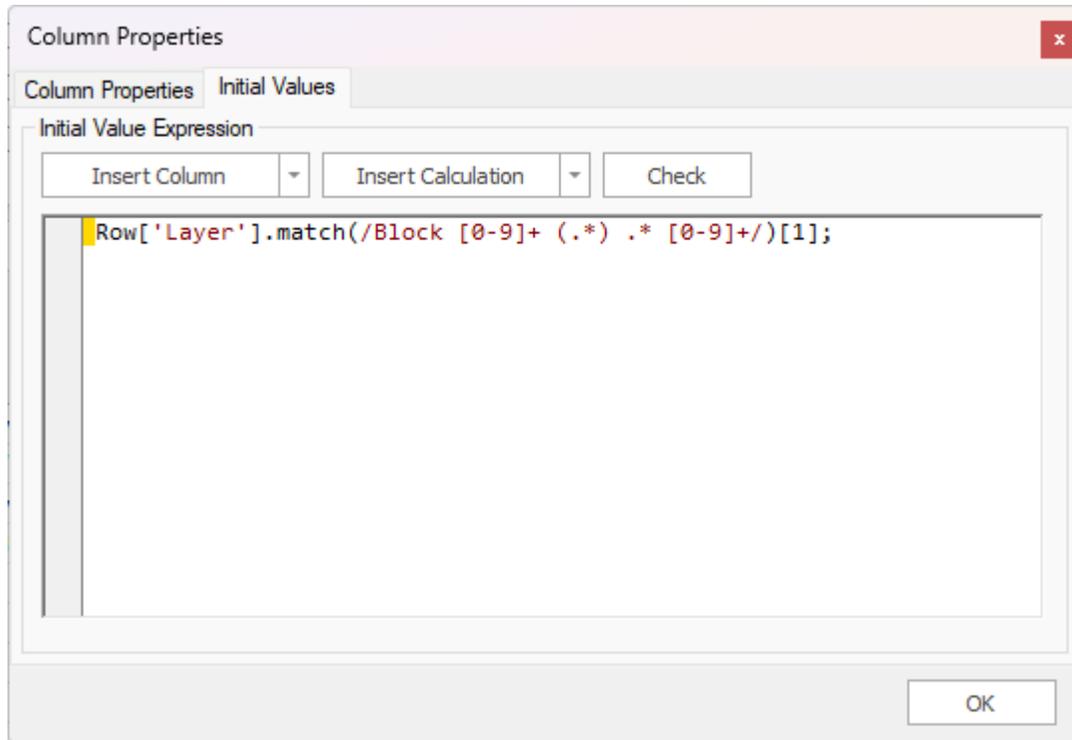
You can then click OK and your new column will be created:

ElementID	Block	Layer	Block ID	EntityID	MSLink	ElementType	Volume	Area
=	r1c	r1c	14	=	=	r1c	=	=
1139245	Model_Space	Block 14 COAL Strip 26	14	0	0	PolyFaceMesh	27724,3998221003	10464,512643598

Following this same script and logic I will extract the rest of the parts into their own columns such as the material type and strip number.

For the material type, which is COAL, I will add a new stored column (which I will call “Material”) following the steps above and use this script to capture and extract the material type this time:

```
Row['Layer'].match(/Block [0-9]+ (.*) .* [0-9]+/)[1];
```



In this example, you can see my script is the same and the only difference is that I am choosing to capture a different part of the matched string, which is the material type, indicated by the first `.*` in nested brackets:

```
Row['Layer'].match(/Block [0-9]+ (.*) .* [0-9]+/)[1];
```

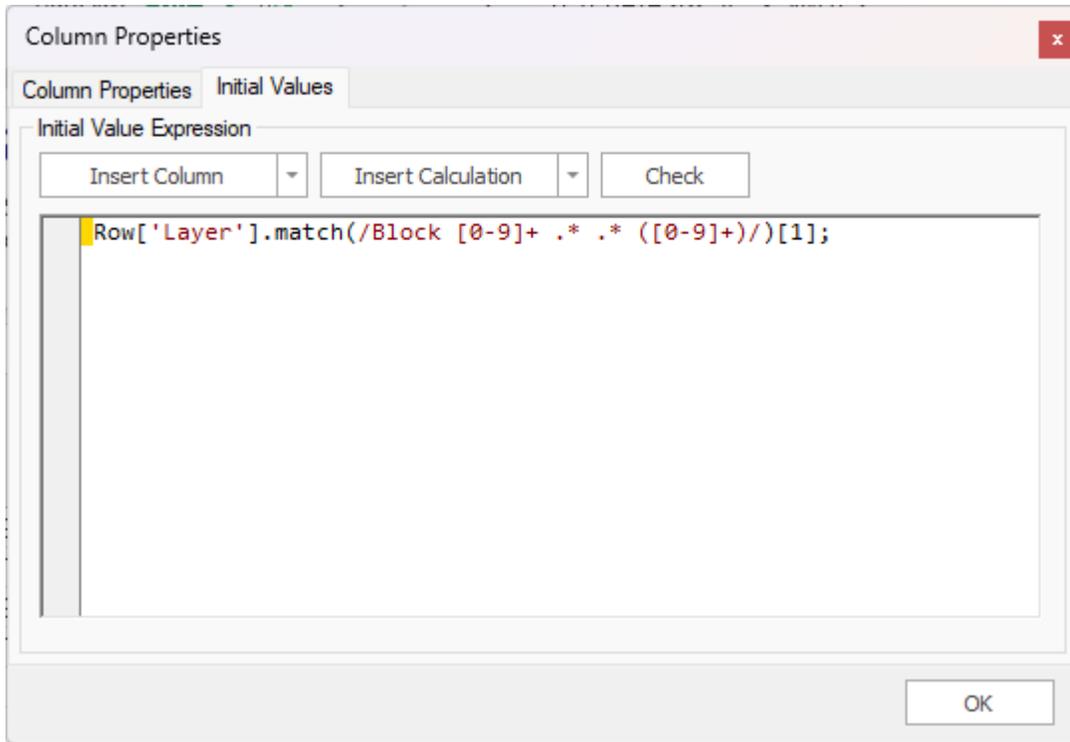
I can then click OK and my new column with the material type will be added:

The screenshot shows a software window titled "Layer Data: Pasted layer". The interface includes a menu bar with "Main" and "Search", and a toolbar with various actions like "Filter Graphics", "Columns", "Refresh", "Inplace", "Delete", "Properties", "Zoom", "Zoom and Highlight", "Pan", "Highlight All", "Un Highlight All", "Un Highlight Selected", "Highlight Selected", "Copy", "Copy Html", "Export to Excel", "Print", and "Pivot". Below the toolbar is a text prompt: "Drag a column header here to group by that column". The main area contains a table with the following data:

ElementID	Block	Layer	Block ID	Material	ntityID	MSLink	ElementType	Volume	Area
=	Model_Space	Block 14 COAL Strip 26	14	COAL	=	=	PolyFaceMesh	27724,3998221003	10464,512643598

Finally, I will extract the strip number at the end and put it into a new column that I will call "Strip Number". I will add a stored column as above and then I will use the following script this time, all the same except that I am capturing the final part of the original string, as indicated by where I put the nested brackets, which is the strip number:

```
Row['Layer'].match(/Block [0-9]+ .* .* ([0-9]+)/)[1];
```



I then click OK and my new column is added with the Strip Number:

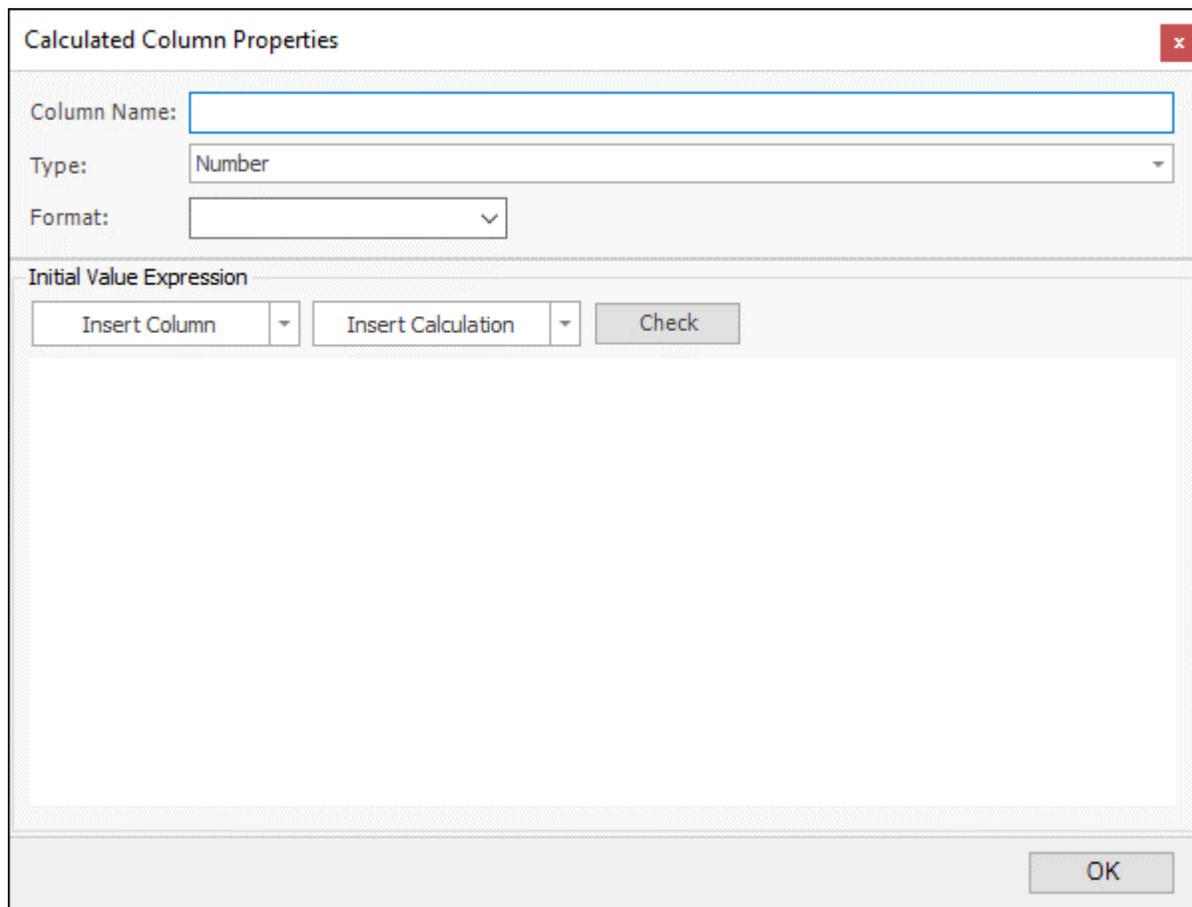
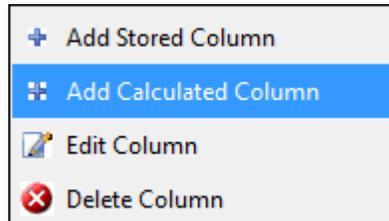
The image shows a software interface window titled "Layer Data: Pasted layer". It features a ribbon menu with sections for Filter, Edit, Selection, and Output. Below the ribbon is a data table with the following columns: ElementID, Block, Layer, Block ID, Material, Strip Number, EntityID, MSLink, Element Type, Volume, and Area. The "Strip Number" column header and its corresponding value "26" in the first data row are highlighted with a red box.

ElementID	Block	Layer	Block ID	Material	Strip Number	EntityID	MSLink	Element Type	Volume	Area
1139245	*Model_Space	Block 14 COAL Strip 26	14	COAL	26	0	0	PolyFaceMesh	27724,3998221003	10464,512643598

Further data on how to use regular expressions can be found online for example on the W3 Schools website: https://www.w3schools.com/js/js_regexp.asp.

Add Calculated Column

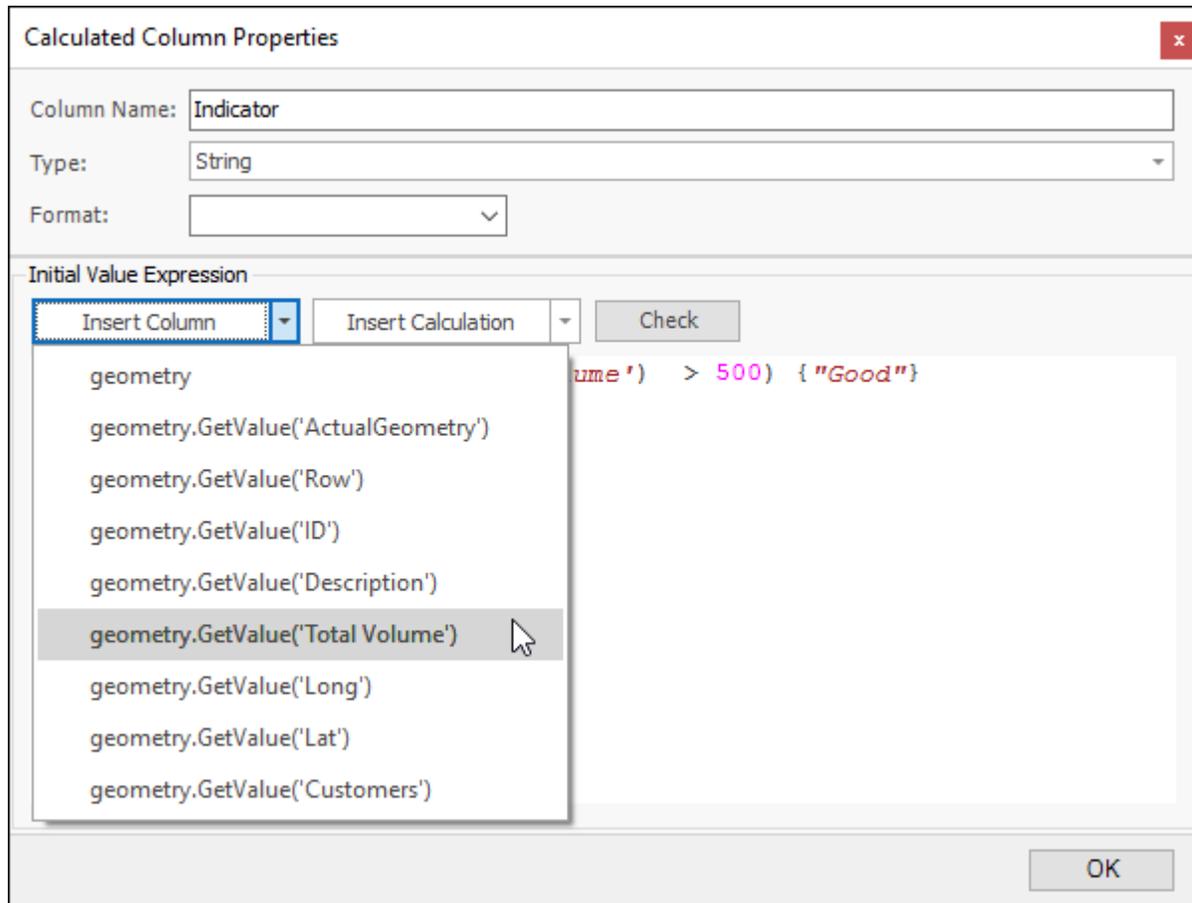
In the Layer Data Grid you are also able to add a **Calculated Column** which is a column that dynamically calculates values according to some calculation you have specified for it:

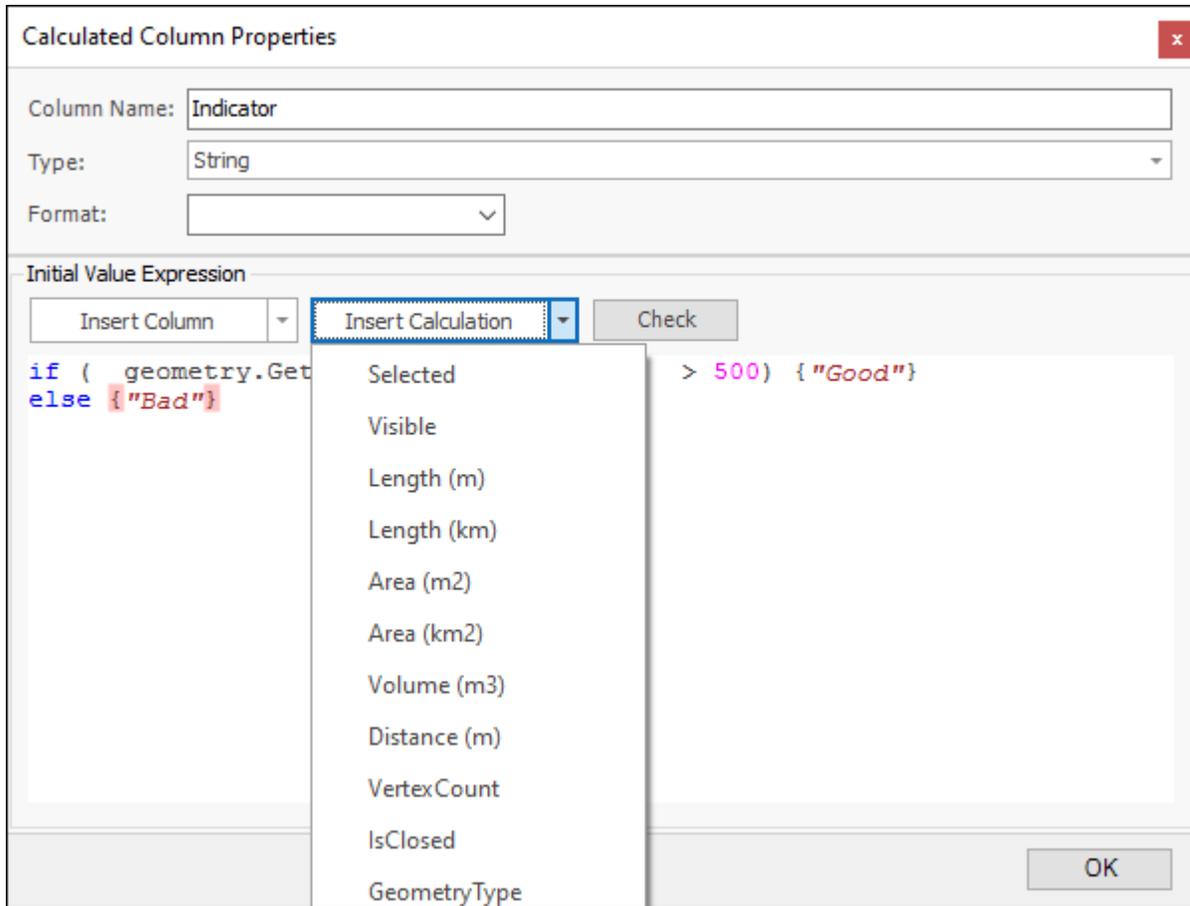
A dialog box titled "Calculated Column Properties" with a close button (X) in the top right corner. It contains the following fields and controls:

- Column Name:** A text input field.
- Type:** A dropdown menu with "Number" selected.
- Format:** A dropdown menu with a downward arrow.
- Initial Value Expression:** A section containing:
 - An "Insert Column" dropdown menu.
 - An "Insert Calculation" dropdown menu.
 - A "Check" button.
- A large empty text area for the expression.
- An "OK" button at the bottom right.

Type in the **Column Name**, **Type** and **Format** and then you can specify your expression below. Dropping down on **Insert Column** you can choose a column from the Layer Data Grid to insert in the expression to get values from, and dropping

down on **Insert Calculation** you can insert a predefined calculation into the expression, these expressions use JavaScript:





In this example you will see I have made a column called **Indicator** and the expression I have specified for it says if the value of the **Total Volume** column in my Layer Data Grid is greater than 500 then say “Good”, if not then say “Bad”:

Calculated Column Properties x

Column Name:

Type:

Format:

Initial Value Expression

```
if ( geometry.GetValue('Total Volume') > 500) {"Good"}  
else {"Bad"}
```

I can then click **Check** to see if this expression is correct and it will let me know:

Calculated Column Properties

Column Name:

Type:

Format:

Initial Value Expression

```
if ( geometry.GetValue('Total Volume') > 500) {"Good"}
else {"Bad"}
```



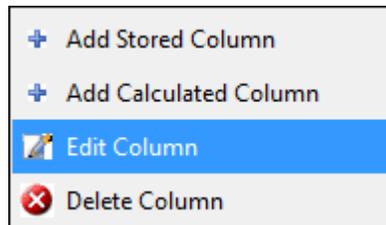
I can then click **OK** on this and the dialogue and my calculated column has been added, any time the values in the **Total Volume** column are changed or any time a new row is added and a value for **Total Volume** is put this column will update accordingly:

Drag a column header here to group by that column

	Row	ID	Description	Long	Lat	Customers	Total Volume	Indicator
▶	2	3	Point1	28.1537048541408	-26.3059967637583	347	694	Good
	3	4	Point2	28.1723580461311	-26.3169973641628	413	826	Good
	4	5	Point3	28.16757517639	-26.3284762515414	234.5	469	Bad
	5	6	Point4	28.1393562449176	-26.3193887990334	324.5	649	Good
	6	7	Point5	28.1398345318917	-26.3313459733861	172.5	345	Bad
	7	8	Point6	28.1427042537364	-26.348564304454	382	764	Good
	8	9	Point7	28.1728363331052	-26.3509557393245	128	256	Bad
	9	10	Point8	28.1910112381213	-26.3456945826093	267	534	Good
	10	11	Point9	28.1972289687847	-26.3179539381111	267	765	Good
	11	12	Point10	28.189576377199	-26.2916481545351	500	1000	Good
	12	13	Point11	28.207272995241	-26.291169867561	232	464	Bad

Edit Column

Edit Column will bring up a dialogue where you can edit the columns properties whether it is a calculated or stored column. This dialogue is the same dialogue you see in adding a new stored or calculated column (see section on **Add Stored Column** and **Add Calculated Column** to see how this dialogue works):



Total Volume
694
826
469
649
345
764
256
534
765
1000
464

×
Column Properties

Column Properties Initial Values

Column Name:

Type:

Width:

Format:

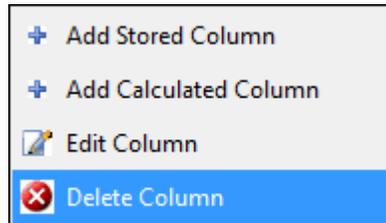
Read Only
 Visible
 Required
 Key
 Unique

Lookup values from a layer or list

As an example of editing, if a column was read only and I wanted to change this I could tick off **Read Only** here.

Delete Column

To delete any column in the Layer Data Grid, click **Delete Column** (Note: if your column is set as a key column, you will not be able to delete it, unless you tick off **Key** in the Edit Column dialogue):



Grid Context Menu

Right clicking in the grid will bring up the following context menu:

Row	ID	Description	Long	Lat
2	3	Point1	28.1537048541408	-26.305996
3	4	Point2	28.1723580461311	-26.316997
4	5	Point3	28.16757517639	-26.328476
5	6	Point		
6	7	Point		
7	8	Point		
8	9	Point		
9	10	Point		
10	11	Point		
11	12	Point		
12	13	Point		
13	14	Point		
14	15	Point		
15	16	Point		
16	17	Point		
17	18	Point		
18	19	Point		
19	20	Point		
20	21	Point		
21	22	Point		
22	23	Point		
23	24	Point		
24	25	Point		
25	26	Point		
26	27	Point		
27	28	Point		
28	29	Point		

 Zoom Selected
 Zoom and Highlight
 **Pan Selected**

Select All
Unselect All

Copy Selected Data
Copy as HTML

Export ▶
Print Preview...
 Properties

Select in graphics
Unselect in graphics

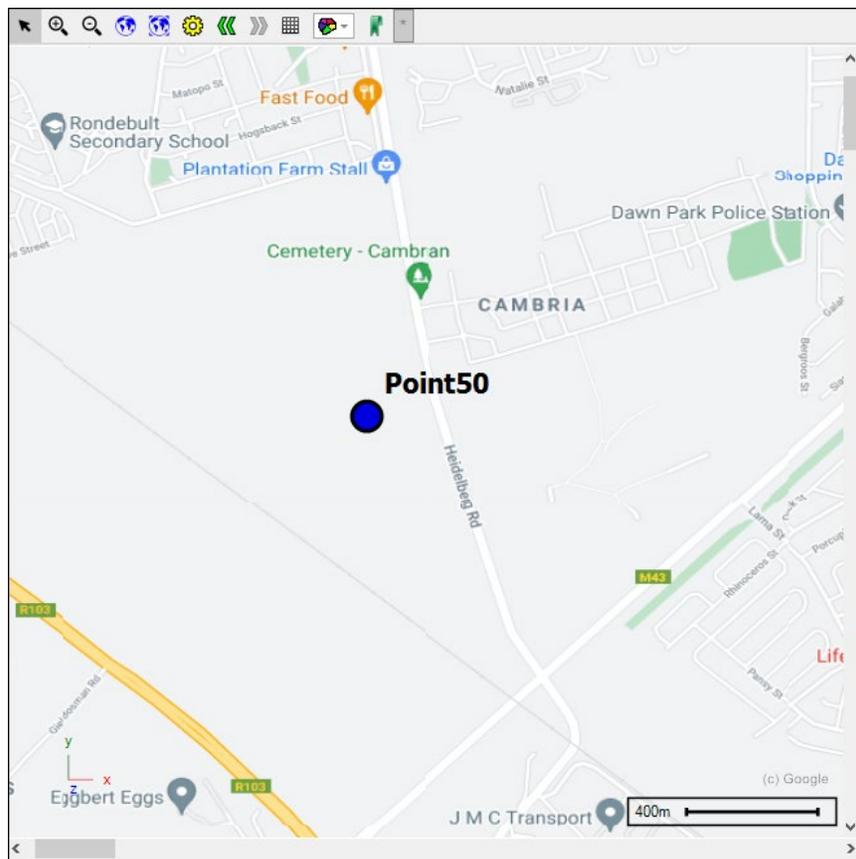
 Delete

Zoom/Highlight/Pan Selected

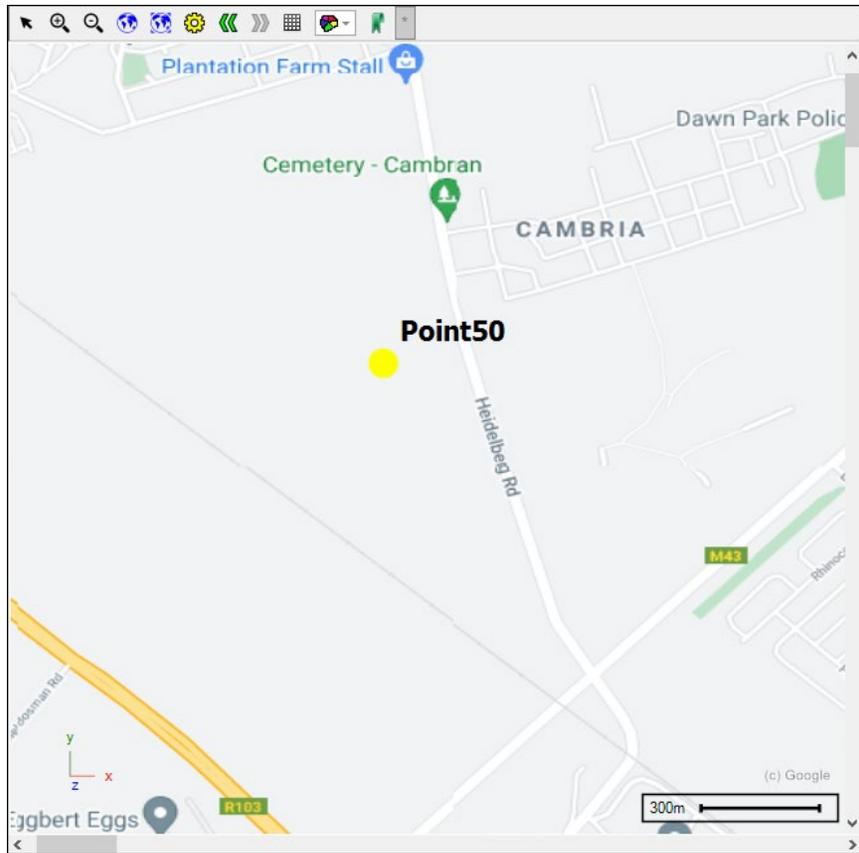
Zoom Selected will zoom to the selected row/s in your scene, **Zoom and Highlight** will zoom to and highlight the currently selected row/s in your scene and **Pan Selected** will pan to the currently selected row/s:

50	51	Point49	28.2211433174901	-26.31269278139
51	52	Point50		
52	53	Point51		
53	54	Point52		
54	55	Point53		
55	56	Point54		
56	57	Point55		

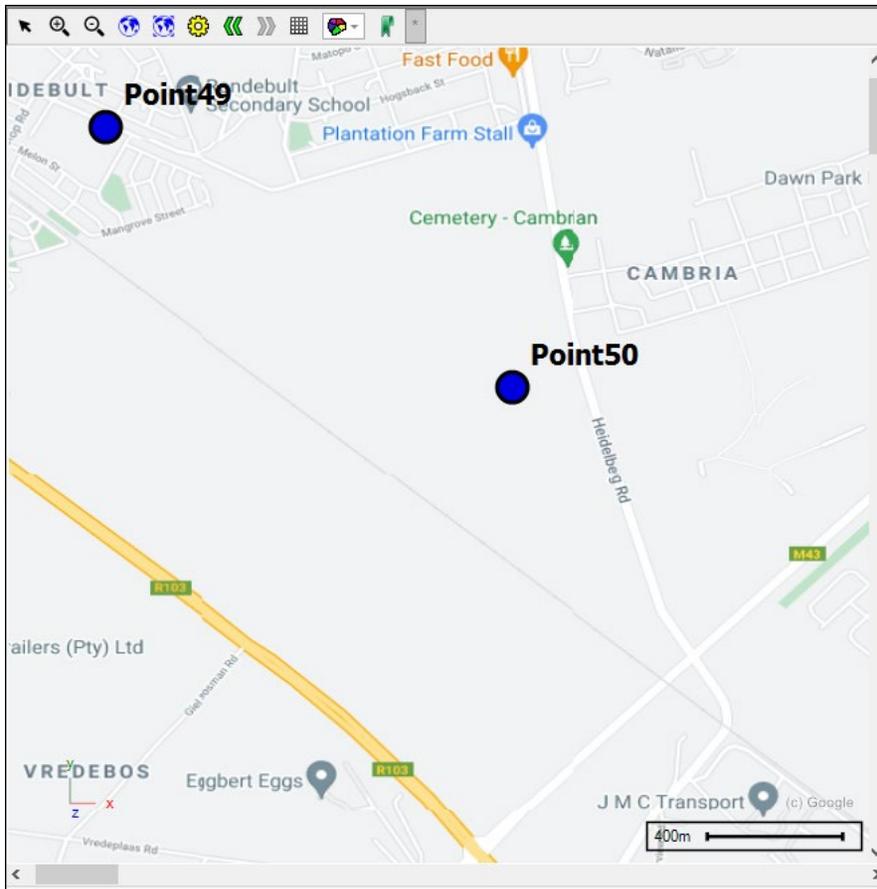
Zoom:



Zoom and Highlight:

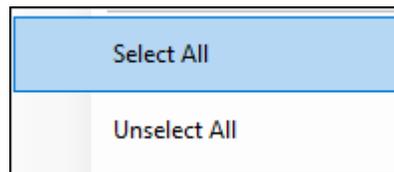


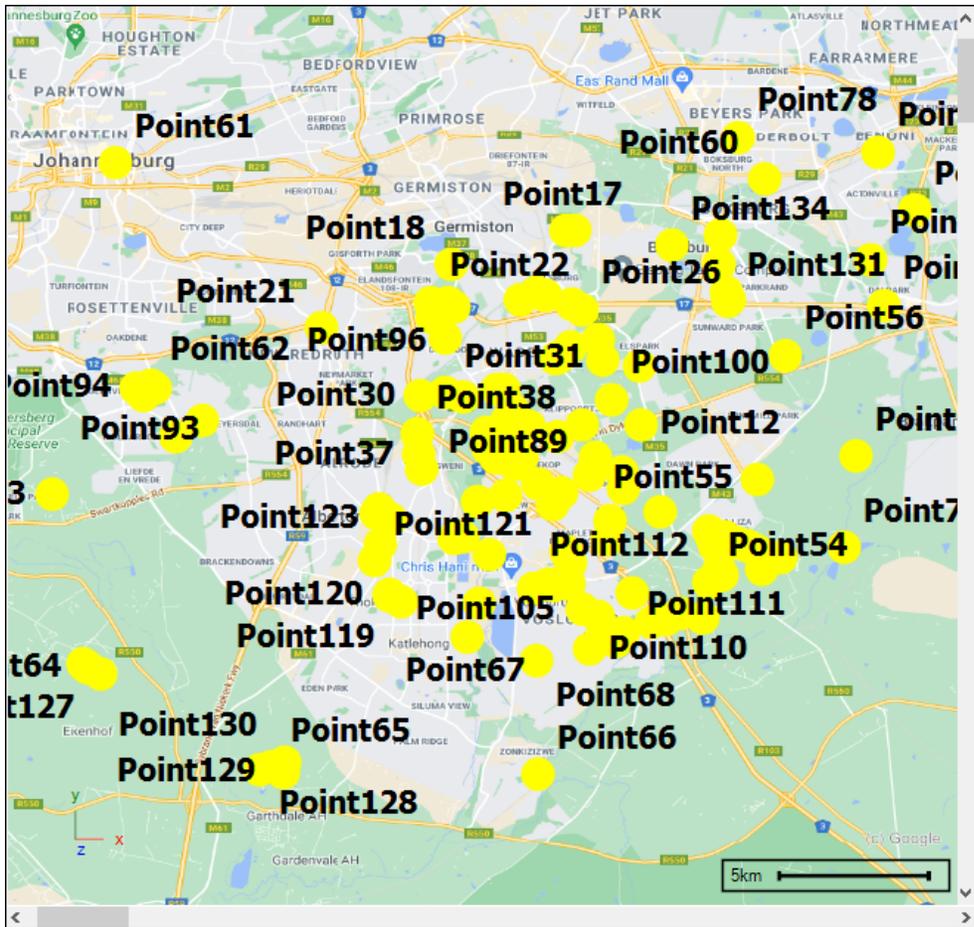
Pan:

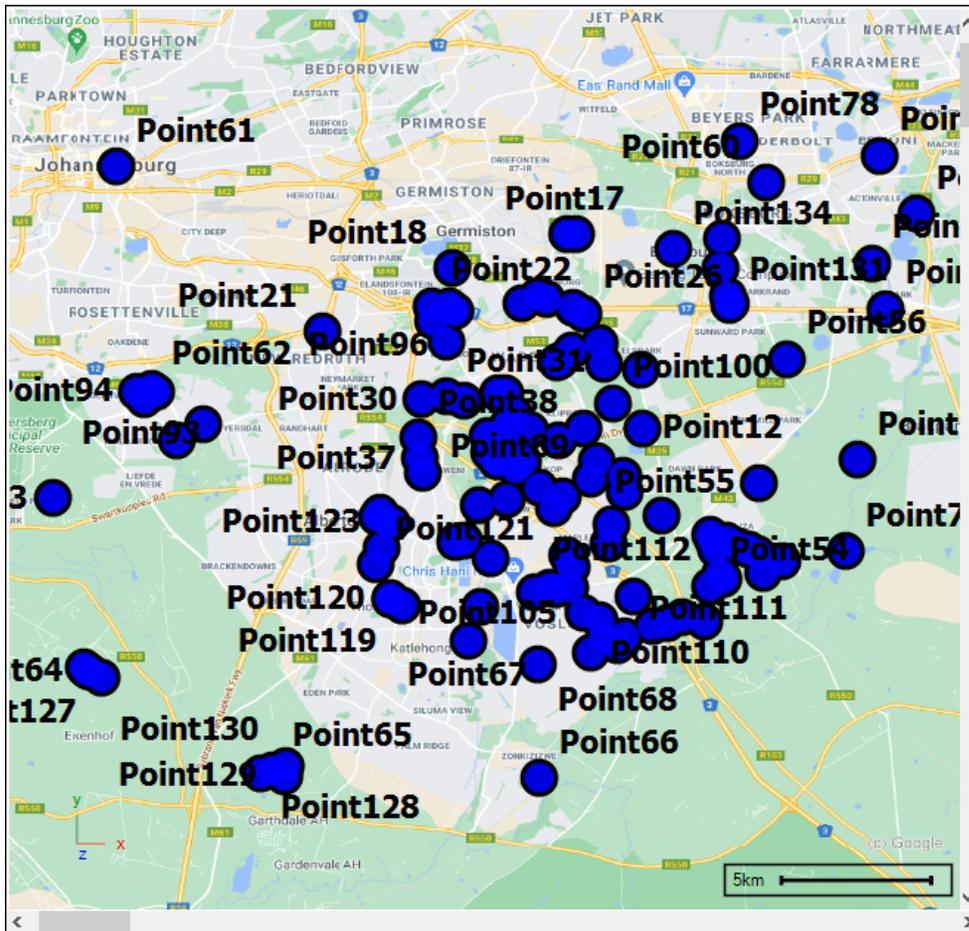


Select/Unselect All

Select All will select all the elements in the scene, and **Unselect All** will unselect all selected items in the scene:

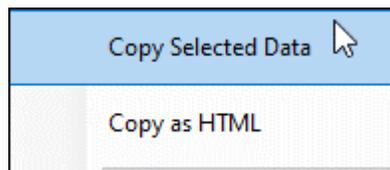


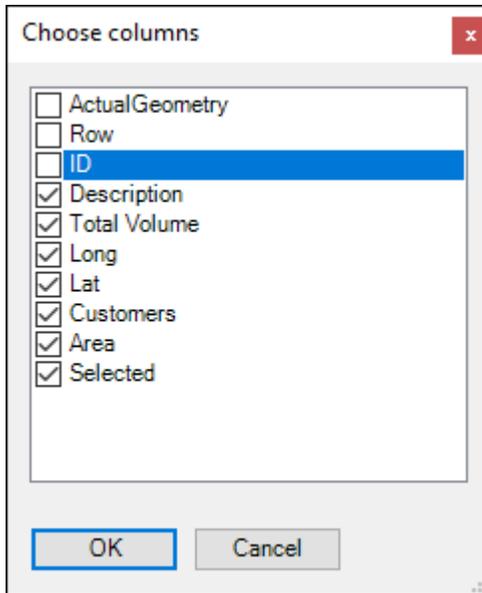




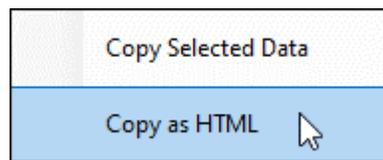
Copy Selected Data/Copy as HTML

Copy Selected Data will copy the currently selected row/s to the clipboard, to select all rows you can use **ctrl A**. You will then be prompted to choose which columns you would like copied out, then click **OK** and your data has been copied to the clipboard and can be pasted elsewhere:



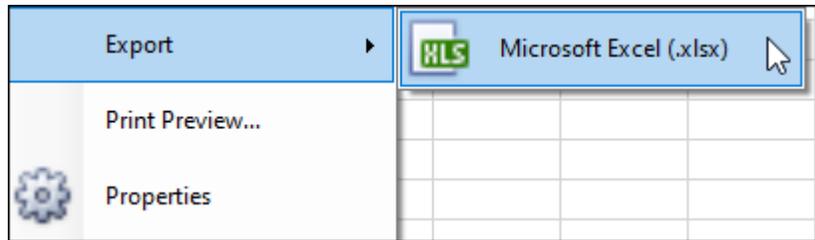


You can also copy out data as HTML by selecting **Copy as HTML**:



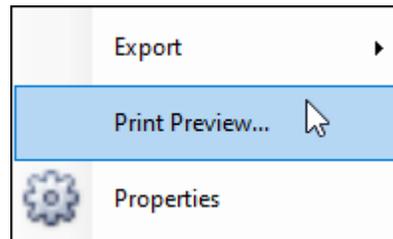
Export

The Layer Data Grid can be exported to Excel with **Export > Microsoft Excel**:



Print Preview

You can see a print preview of your grid and edit and adjust this to your liking before printing:



Preview

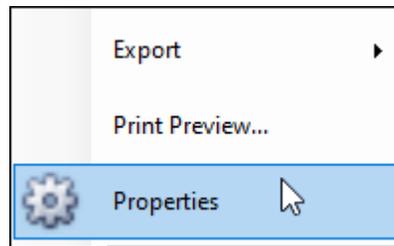
Open Save Print Header/Footer Scale Margins Orientation Size Find Thumbnails Bookmarks Editing Fields Previous Page Next Page First Page Last Page Many Pages Zoom Page ... Exp... Close

Row	ID	Description	Long	Lat	Total Volume	Customers	Area
2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2
3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3
4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2
7	8	Point6	28.1427042537364	-26.348564304454	764	382	2
8	9	Point7	28.1728363331052	-26.3509557393245	256	128	3
9	10	Point8	28.1910112381213	-26.3456945826093	534	267	3
10	11	Point9	28.1972289687847	-26.3179539381111	765	267	3
11	12	Point10	28.189576377199	-26.2916481545351	1000	500	3
12	13	Point11	28.207272995241	-26.291169867561	464	232	3
13	14	Point12	28.2268827611794	-26.291169867561	134	67	3
14	15	Point13	28.2264044742053	-26.2715601016225	608	304	3
15	16	Point14	28.2139690128785	-26.2696469537261	839	419.5	3
16	17	Point15	28.2125341519562	-26.2629509360886	996	498	3
17	18	Point16	28.2048815603704	-26.2266011260564	582	291	3
18	19	Point17	28.2015335515517	-26.2266011260564	381	190.5	3

Page 1 of 4 100%

Properties

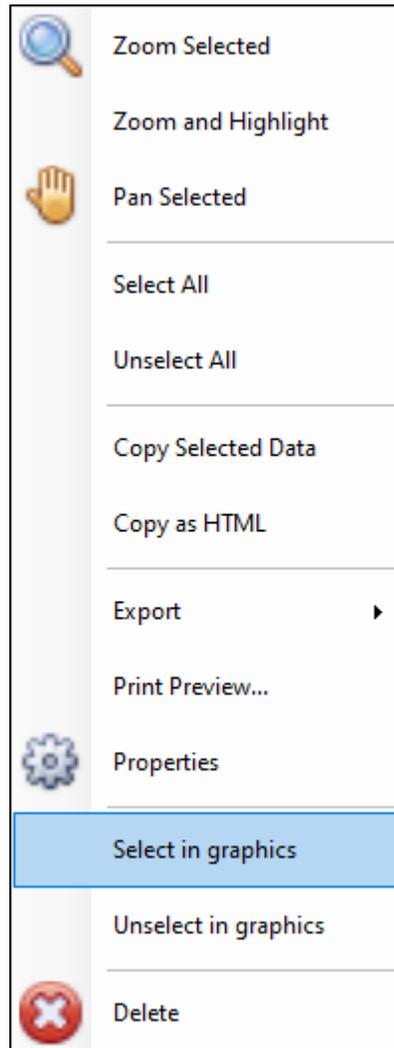
Properties will take you to the **Object Properties** box for the selected row where you can see various details about that record and do various things concerning it (this is the same Object Properties box that comes up when using the **Inspector** tool, see [SpatialXL Guide](#), *Map Tools* section, *Inspector*):



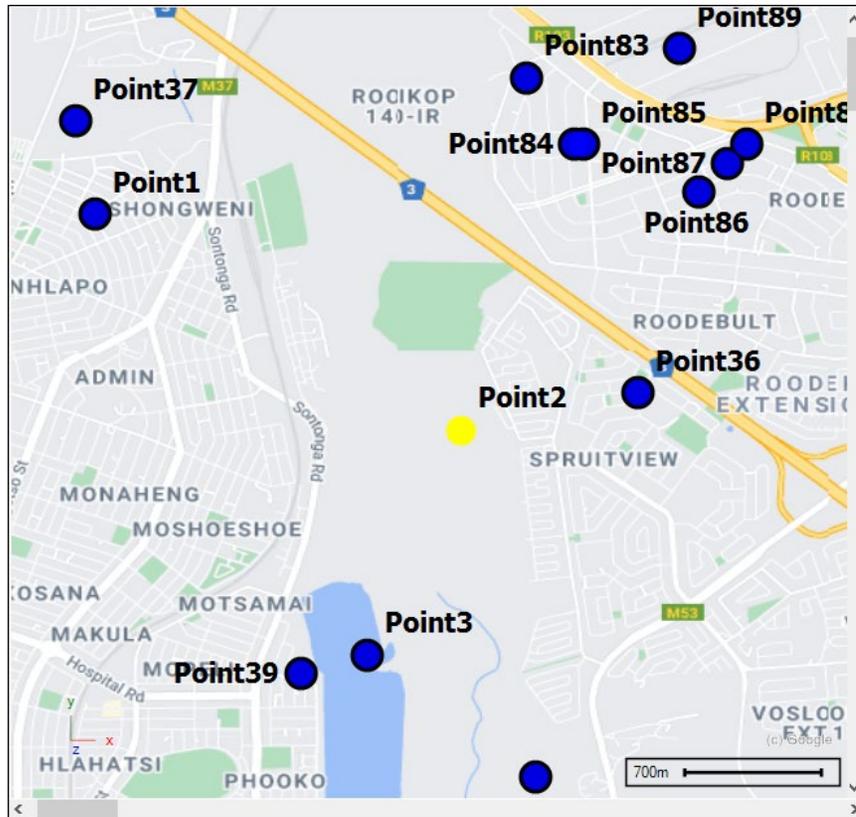
Select/Unselect in Graphics

Select in graphics will select the currently selected row (or rows) in graphics and

Unselect in graphics will unselect that element:



	2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2
▶	3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3
	4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3



Delete

Delete will delete the currently selected row.

Bottom Context Menu

Right clicking in the bottom of the window below any column will bring up the following context menu where you can do various calculations for that column:

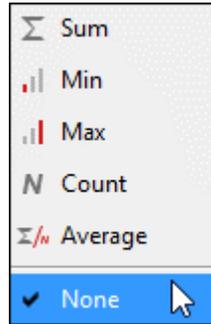
Long	Lat	Total Volume	Customers	Area
=	=	=	=	=
28.1537048541408	-26.3059967637583	694	347	2
28.1723580461311	-26.3169973641628	826	413	3
28.16757517639	-26.3284762515414	469	234.5	3
28.1393562449176	-26.3193887990334	649	324.5	2
28.1398345318917	-26.3313459733861	345	172.5	2
28.1427042537364	-26.348564304454	764	382	2
28.1728363331052	-26.3509557393245	256	128	3
28.1910112381213	-26.3456945826093	534	267	3
28.1972289687847	-26.3179539381111	765	267	3
28.189576377199	-26.2916481545351	1000	500	3
28.207272995241	-26.291169867561	464	232	3

- Σ Sum
-  Min
-  Max
- N Count
- Σ/n Average
- None

You can get the **Sum**, **Min**, **Max**, **Count** and **Average** of the values in that column by clicking on the desired one. In this example I got the sum of my Customers:

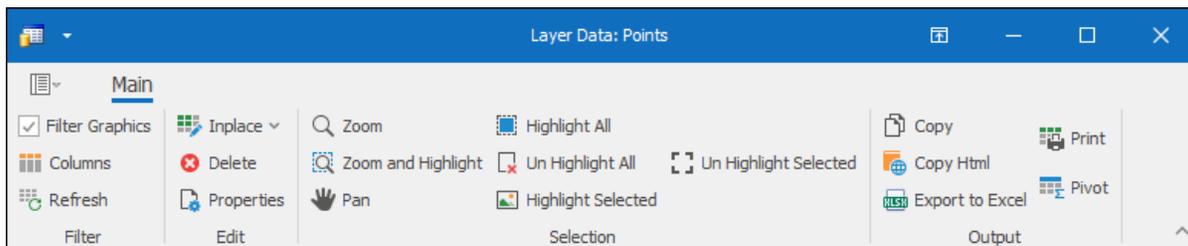
Total Volume	Customers
=	=
694	347
826	413
469	234.5
649	324.5
345	172.5
764	382
256	128
534	267
765	267
1000	500
464	232
SUM=34225	

To have no calculation showing just click on **None**:



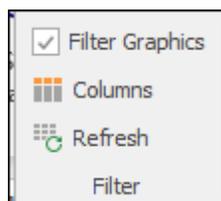
Ribbon

In the ribbon of the Layer Data Grid are various things you can do. We will take up each section of the ribbon:

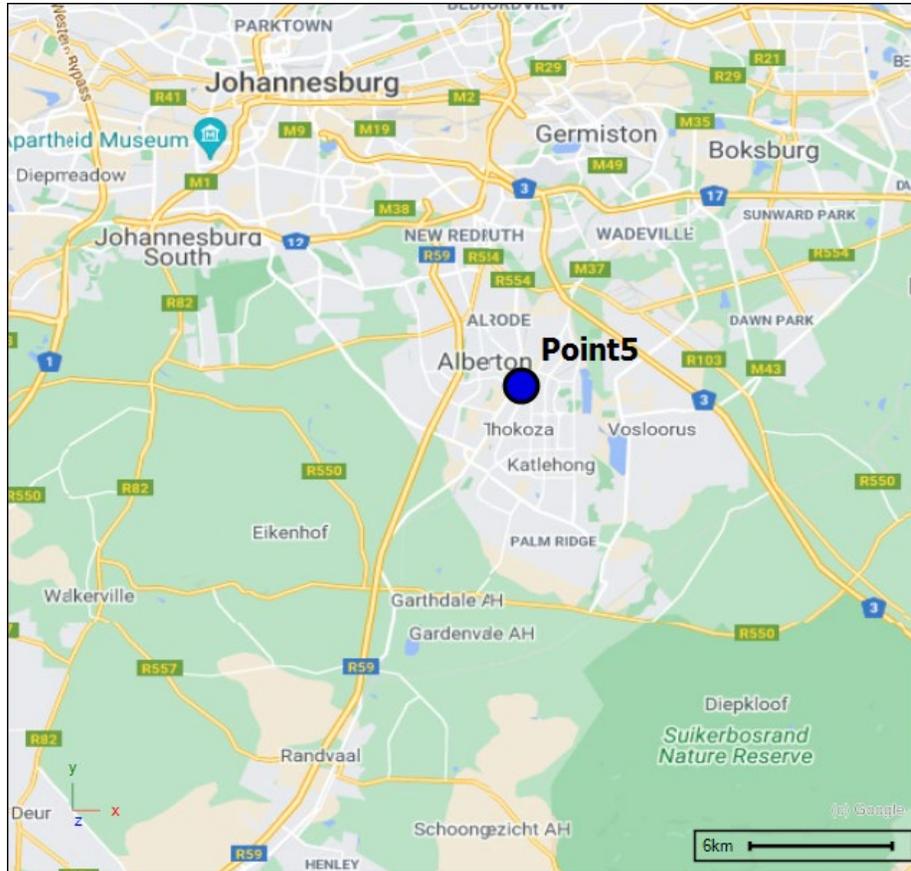


Filter

In the **Filter** section you have the option to **Filter Graphics** or not, this means that when you filter in the grid this will reflect in the graphics as well, this is ticked on by default:



Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected
6	7	Point5	28.1398345318917	-26.3313459733861	345	172.5	2	<input type="checkbox"/>

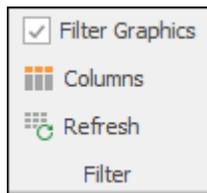


Clicking on **Columns** will bring up the **Manage Columns** dialogue where you can tick on or off what columns you would like to have showing or not and whether they are **Visible**. You can also see whether they are **Read Only**:

Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Selected
2	3	Point1	28.1537048541408	-26.3059967637583	694	347	2	<input type="checkbox"/>
3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	<input type="checkbox"/>
4	5	Point3	28.16757517639	-26.3284762515414	469	234.5	3	<input type="checkbox"/>
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2	<input type="checkbox"/>

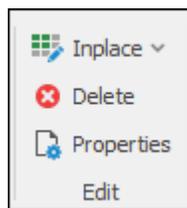
Manage Columns					
Name	Format	Visible	Visible Index	ReadOnly	
ActualGeometry		<input type="checkbox"/>	-1	<input type="checkbox"/>	
Row		<input checked="" type="checkbox"/>	0	<input checked="" type="checkbox"/>	
ID	Numeric "G"	<input checked="" type="checkbox"/>	1	<input type="checkbox"/>	
Description		<input checked="" type="checkbox"/>	2	<input type="checkbox"/>	
Long	Numeric "G"	<input checked="" type="checkbox"/>	3	<input type="checkbox"/>	
Lat	Numeric "G"	<input checked="" type="checkbox"/>	4	<input type="checkbox"/>	
Customers	Numeric "G"	<input checked="" type="checkbox"/>	6	<input type="checkbox"/>	
Selected		<input checked="" type="checkbox"/>	8	<input checked="" type="checkbox"/>	
Total Volume	Numeric "G"	<input checked="" type="checkbox"/>	5	<input type="checkbox"/>	
Area	Numeric "G"	<input checked="" type="checkbox"/>	7	<input type="checkbox"/>	

Refresh will refresh the grid if you have made any changes and this is needed:



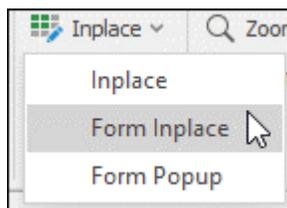
Edit

In the **Edit** section you can choose how you would like to edit the grid; **Inplace** will let you edit the grid in the grid itself:



	2	3	Point1		28.1537048
	3	4	Point2		28.1723580

Form Inplace will bring up an edit form in the grid when you edit double click in the grid to edit:



3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3	POINT(28.1...	<input type="checkbox"/>
4	5	Point3	28.16757517639	-26.3284762515414	470	234.5	3	POINT(28.1...	<input type="checkbox"/>

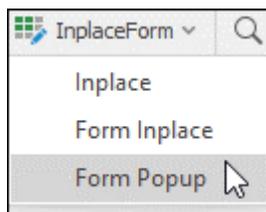
Actual Geometry: POINT(28.16757517639 -26.3284762515414) Row: 4 ID: 5

Description: Point3 Long: 28.16757517639 Lat: -26.3284762515414

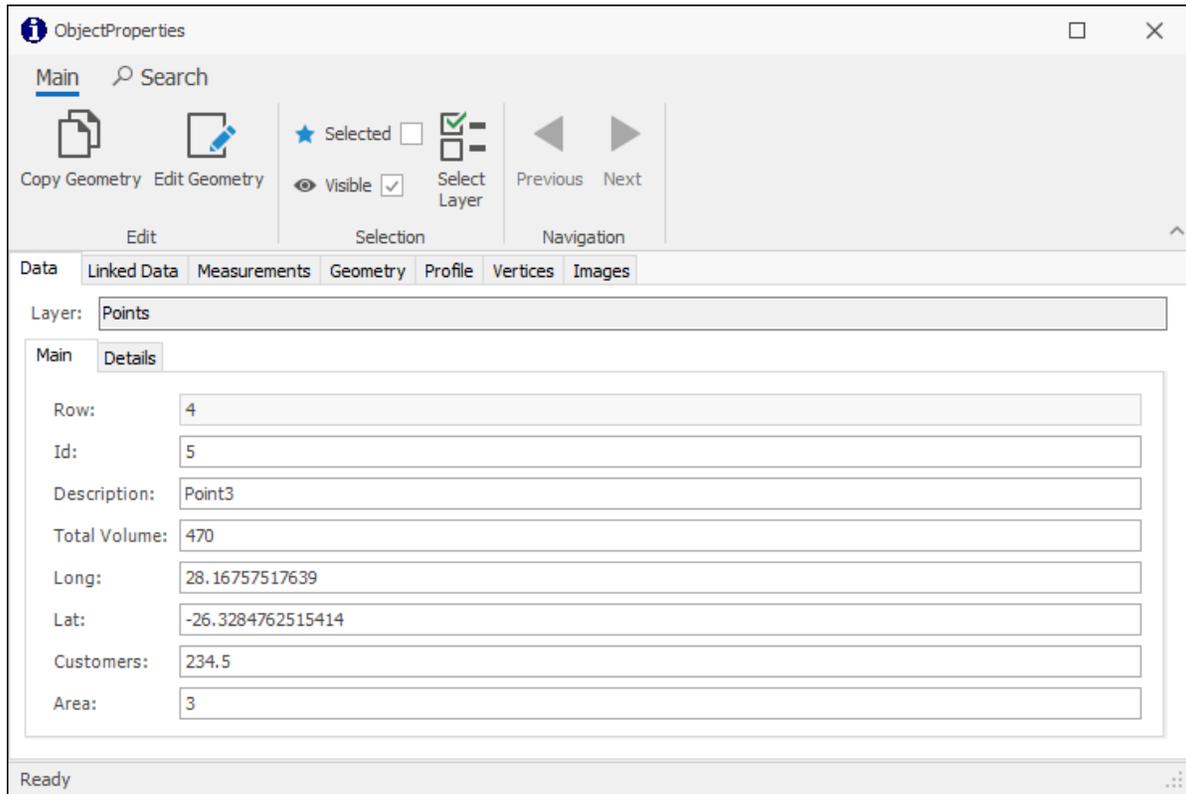
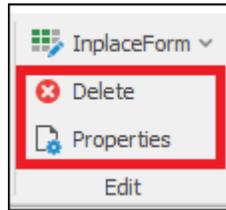
Customers: 234.5 Total Volume: 470 Area: 3

Update Cancel

And **Form Popup** will bring up the edit form as a pop-up window:

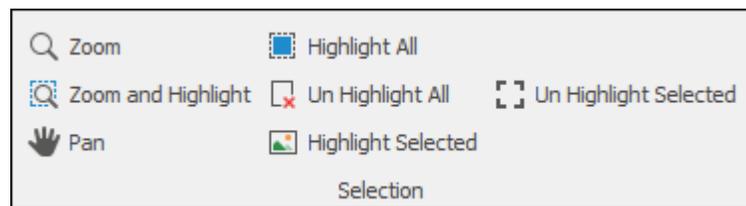


Delete will delete the selected column/s and **Properties** will take you to the **Object Properties** box for the selected row where you can see various details about that record and do various things concerning it (this is the same Object Properties box that comes up when using the **Inspector** tool, see [SpatialXL Guide](#), *Map Tools* section, *Inspector*):



Selection

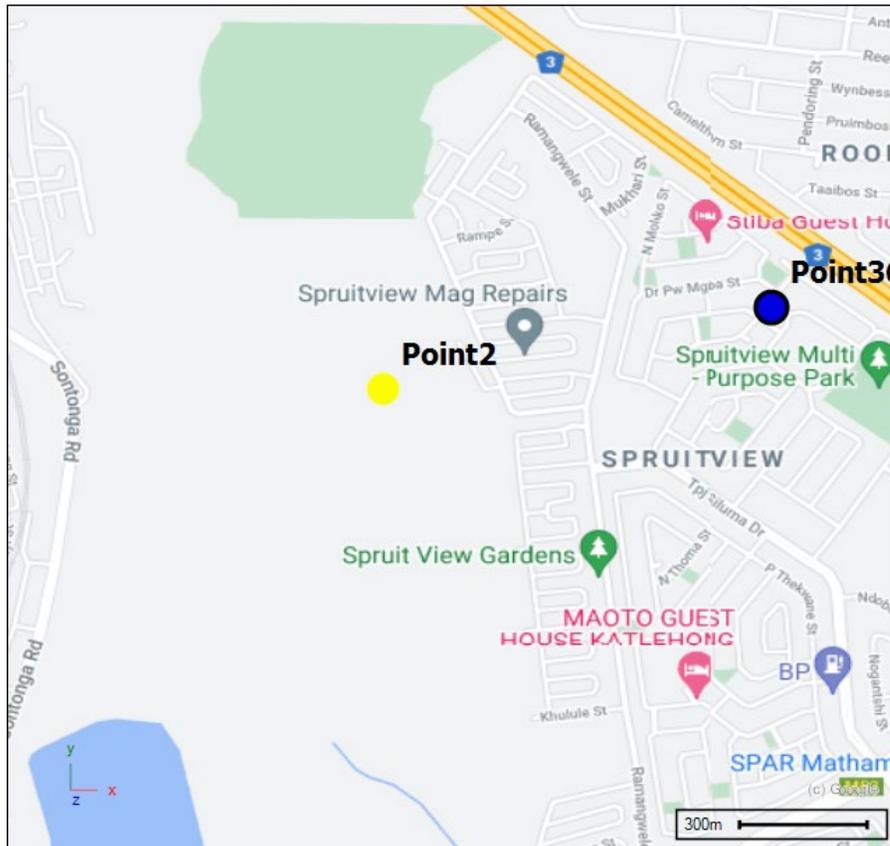
In the **Selection** section you can zoom, pan and select etc. a selected row or rows; the row/s will be zoomed/highlighted/panned to in the scene:



For example, I will **Zoom and Highlight** a row in my grid:

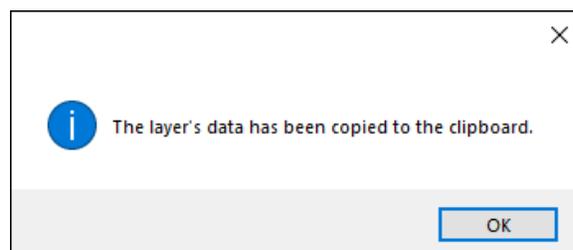
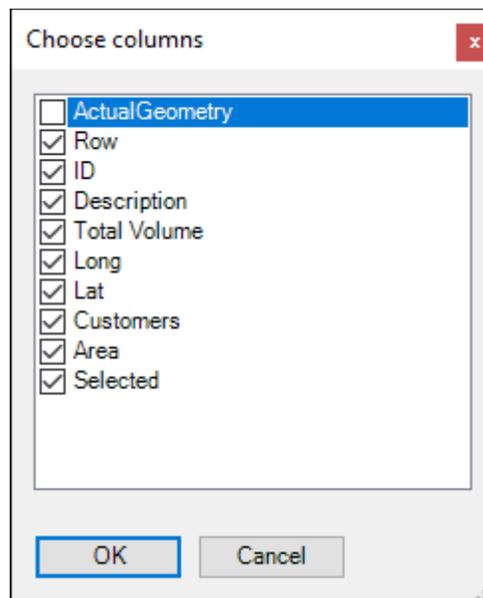
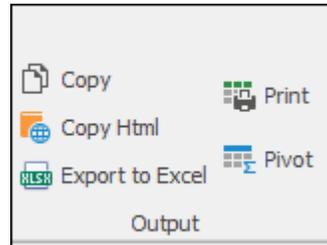
The screenshot shows a software interface with a menu bar and a data grid. The menu bar includes options like Filter Graphics, Columns, Refresh, InplaceForm, Delete, Properties, Zoom, Zoom and Highlight (highlighted in a red box), Pan, Highlight All, Un Highlight All, and Un Highlight Selected. Below the menu bar is a data grid with the following columns: Row, ID, Description, Long, Lat, Total Volume, Customers, Area. Row 3 is highlighted in blue.

Row	ID	Description	Long	Lat	Total Volume	Customers	Area
2	3	Point1	28.1537048541408	-26.3050067637583	694	348	2
3	4	Point2	28.1723580461311	-26.3169973641628	826	413	3
4	5	Point3	28.16757517659	-26.3264762515414	470	234.5	3
5	6	Point4	28.1393562449176	-26.3193887990334	649	324.5	2

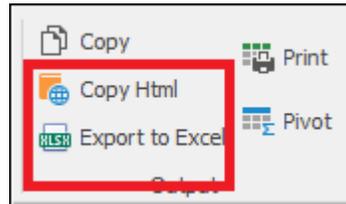


Output

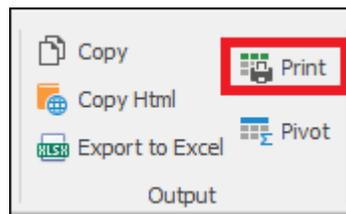
In the **Output** section you are able to **Copy** selected rows (to select all rows do **ctrl A**), a dialogue will then come up prompting you to choose which columns to copy out, then click **OK** and your data has been copied to clipboard:



You can also copy out selected rows as HTML with **Copy Html**. The data grid can also be exported to Excel with **Export to Excel** which will export it to a new workbook:



Print will bring up a print preview of your data grid where you can edit and do various things before printing it:



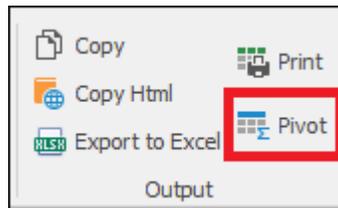
Preview

Open Save Print Header/Footer Scale Margins Orientation Size Find Thumbnails Bookmarks Editing Fields Previous Page Next Page First Page Last Page Many Pages Zoom Page ... Exp... Close

Row	ID	Description	Long	Lat	Total Volume	Customers	Area	Actual Geomet	Selected
2	3	Point1	28.15370485414	-26.30599676375	694	348	2	POINT(28.1	<input type="checkbox"/>
3	4	Point2	28.17235804613	-26.31699736416	826	413	3	POINT(28.1	<input checked="" type="checkbox"/>
4	5	Point3	28.16757517639	-26.32847625154	470	234.5	3	POINT(28.1	<input type="checkbox"/>
5	6	Point4	28.13935624491	-26.31938879903	649	324.5	2	POINT(28.1	<input type="checkbox"/>
6	7	Point5	28.13983453189	-26.33134597338	345	172.5	2	POINT(28.1	<input type="checkbox"/>
7	8	Point6	28.14270425373	-26.34856430445	764	382	2	POINT(28.1	<input type="checkbox"/>
8	9	Point7	28.17283633310	-26.35095573932	256	128	3	POINT(28.1	<input type="checkbox"/>
9	10	Point8	28.19101123812	-26.34569458260	534	267	3	POINT(28.1	<input type="checkbox"/>
10	11	Point9	28.19722896878	-26.31795393811	765	267	3	POINT(28.1	<input type="checkbox"/>
11	12	Point10	28.18957637719	-26.29164815453	1000	500	3	POINT(28.1	<input type="checkbox"/>
12	13	Point11	28.20727299524	-26.29116986756	464	232	3	POINT(28.2	<input type="checkbox"/>
13	14	Point12	28.22688276117	-26.29116986756	134	67	3	POINT(28.2	<input type="checkbox"/>
14	15	Point13	28.22640447420	-26.27156010162	608	304	3	POINT(28.2	<input type="checkbox"/>
15	16	Point14	28.21396901287	-26.26964695372	839	419.5	3	POINT(28.2	<input type="checkbox"/>
16	17	Point15	28.21253415195	-26.26295093608	996	498	3	POINT(28.2	<input type="checkbox"/>
17	18	Point16	28.20488156037	-26.22660112605	582	291	3	POINT(28.2	<input type="checkbox"/>
18	19	Point17	28.20153355155	-26.22660112605	381	190.5	3	POINT(28.2	<input type="checkbox"/>

Page 1 of 4 100%

Pivot will create a pivot of your data grid for you in Excel in a new worksheet, it will first bring up a dialogue where you will specify the row and column values etc. of the pivot and the new worksheet name:



Pivot Data x

Row Value: ▾

Column Value: ▾

Result Value: ▾

Sheet Name:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1		4	3	2	1												
2	Point1			694													
3	Point10		1000														
4	Point100		763														
5	Point101		946														
6	Point102		761														
7	Point103		938														
8	Point104		798														
9	Point105		444														
10	Point106	605															
11	Point107	362															
12	Point108	349															
13	Point109	186															
14	Point11		464														
15	Point110	292															
16	Point111	878															
17	Point112	161															
18	Point113	38															
19	Point114	44															
20	Point115	229															
21	Point116	817															
22	Point117	626															
23	Point118	235															
24	Point119			10													
25	Point12		134														
26	Point120			766													
27	Point121			648													
28	Point122			405													
29	Point123			392													
30	Point124			675													
31	Point125				673												
32	Point126				904												
33	Point127				856												
34	Point128				728												
35	Point129				911												
36	Point13		608														
37	Point130				520												
38	Point131			571													

Support

T: +27871354351



support@primethought.biz - primethought.biz
Kyalami Estate, Midrand, Johannesburg,
1684, South Africa

