

Back to Basics – Point Groups

A quick look at the fundamentals of point management using Point Groups within AutoCAD Civil 3D

The Point Group functionality allows users to organise, control the appearance of points within your drawing

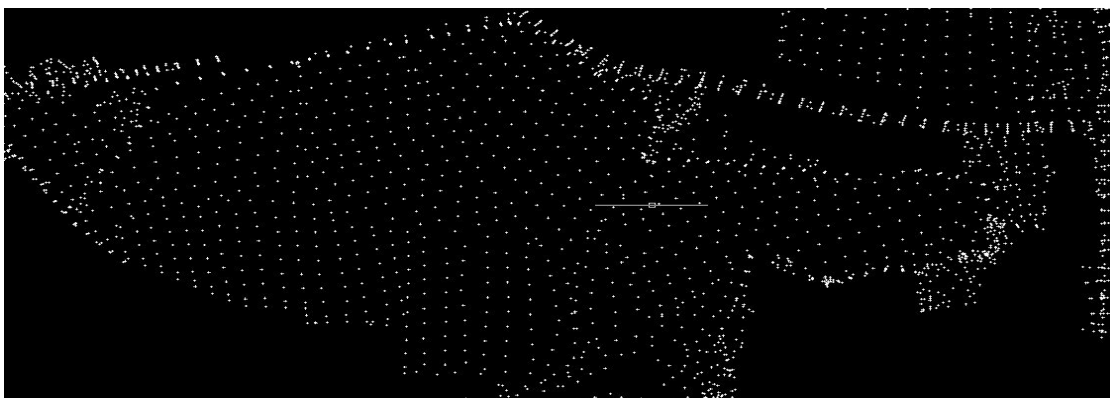
Point Groups provide a flexible and convenient way to identify points that share common characteristics or that is used to perform a task, such as creating a surface. You can use point groups to create groupings of points using point number, point name, point level, raw (field) or full description,

Point groups also play a fundamental role in controlling how a point displays in a drawing. If you have a set of points that share common display characteristics, you can use a point group to identify the point style and point label style for all the points in the point group, instead of assigning a point style and a point label style to each individual point. Also, using a point group you can quickly change the style or label style for all the points in a point group at once, instead of changing each point individually.

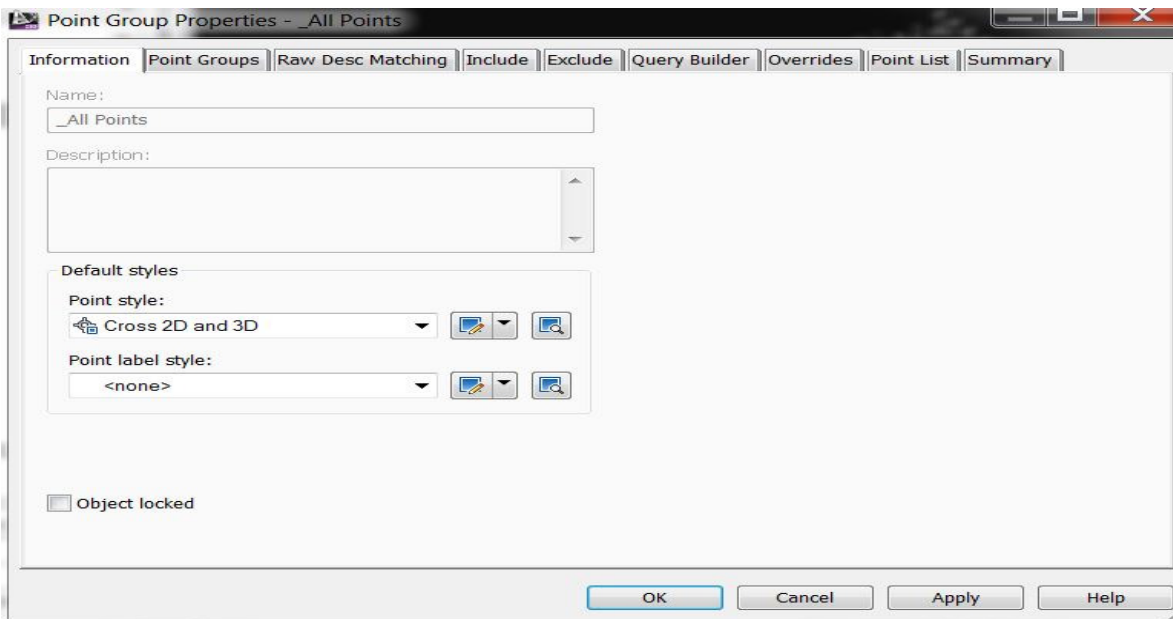
The point group display order, the point group default styles, and the point group override styles can all affect how a point is drawn.

To access the Point Group Placeholder, go to the Toolspace Prospector and Point Groups expand the collection by selecting the + button, you will see that there is already a point group in the collection called All Points this is a default group and all points that are inserted into the drawing regardless of name, description, level etc. will be placed in this group, this allows us to style or label all points the same.

If I insert a point file that has some attributes to it, you will see that regardless of the attributes all points are styled the same



The style and labels are controlled from within the Point Group Properties this can be accessed by right clicking on the Point Group "All Points" the Information Tab includes point and label styles



If you select the points List tab you will see the full list of points contained within the drawing

Point Num...	Easting	Northing	Point L...	Name	Raw Descrip...	Full De...	Descri...	Grid E
1	2351.249m	1521.045m	62.021m					
2	2351.293m	1525.561m	60.504m					
3	2359.784m	1526.319m	60.240m		BIRCH	BIRCH		
4	2360.169m	1522.347m	61.126m					
5	2367.584m	1523.709m	60.926m					
6	2367.063m	1527.016m	59.777m		BIRCH	BIRCH		
7	2367.965m	1532.646m	59.947m					
8	2370.109m	1530.280m	58.773m					
9	2382.204m	1529.260m	58.048m					
10	2379.777m	1535.293m	58.134m					
11	2375.097m	1538.552m	59.925m					
12	2349.791m	1537.499m	61.823m		ASH	ASH		
13	2340.895m	1543.150m	63.843m					
14	2341.923m	1504.153m	57.677m					
15	2332.561m	1505.054m	57.714m		BIRCH	BIRCH		
16	2324.767m	1504.694m	57.208m					
17	2313.334m	1504.811m	57.410m					

You can see by the points list above that there are some descriptions attached to various points and by using point groups we can start to interrogate the list and style points by type in this case by type of tree and start to style and label accordingly.

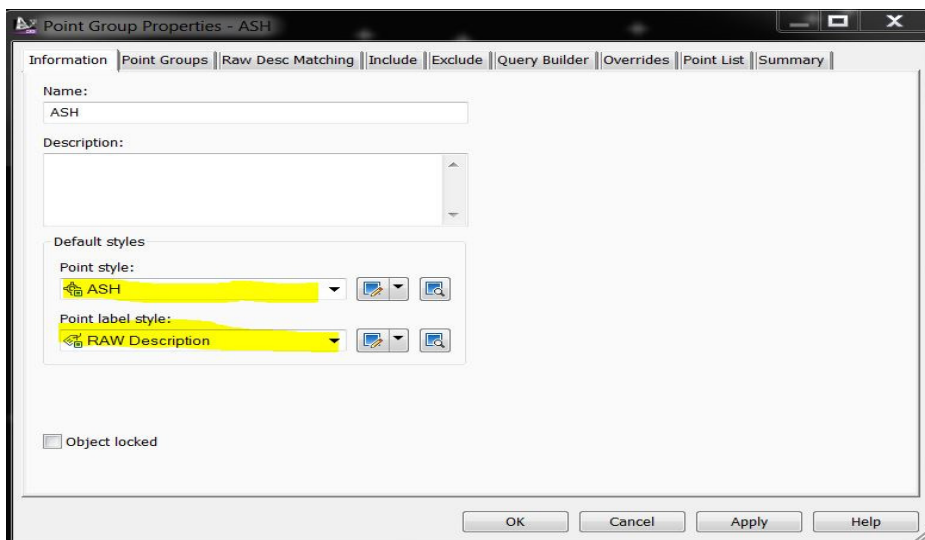
To create your Point Groups simply select Point Groups in Prospector Tab and right click and select New.



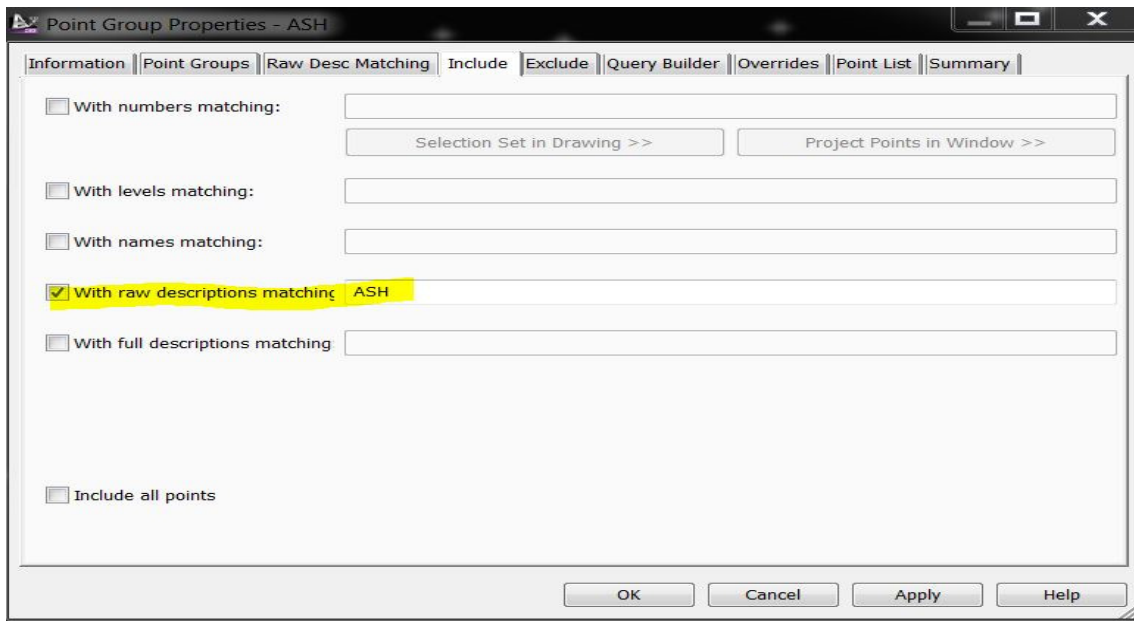
If you look at the image above you will see that I have created 3 different point groups these are based on the attributes or descriptions that was included in the original point file.

To set up the styles for the individual point groups is relatively simple and I have already created 3 different point styles that relate to the type of trees this is covered in the White Paper Back to Basics Description Keys.

Taking the Point Group Ash as an example, if you select the Ash Point Group and right click and select Properties, a dialogue box opens, ensure that you are on the Information tab as this is where you can select the point style and label style that you require



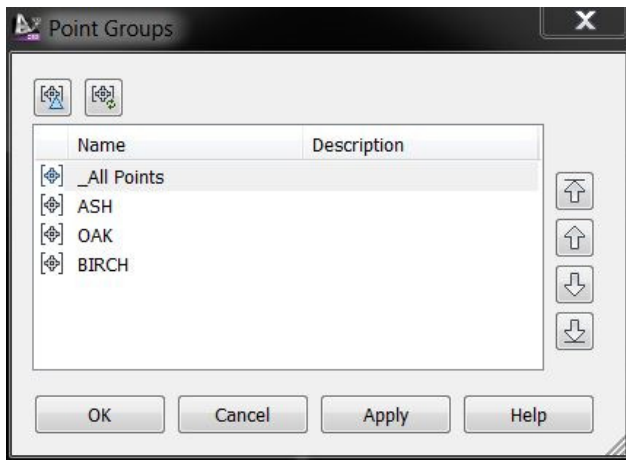
I have selected a point style of ASH and a Label Style of Raw description; we then need to go to the "Include" Tab and select the Raw Descriptions Matching button and enter ASH, or whatever your point description is that you wish to be included within this group and styled accordingly.



If you select Apply and OK then repeat for the remainder of your points and groups it allows you total control over your display.



We can also control the display hierarchy i.e. display the styles attributed to points in a particular order, let's say I want to show my points as trees but not necessary by type of trees, this is done by selecting Point Groups Right Click and Select Properties and then select All Points and move it to the top of the list using the arrows



You can now set the point style and label style of the All Points group and this will override your previous styles so all points will be displayed the same you can use this list to include or omit a style as required.