Topocad 16, news

Here are the changes that are made in Topocad 16.0 unlike Topocad version 15.3.x

System settings

Display

Display on the system settings, there are now functions to set the maximum size of the scanned raster image. Topocad retrieves information about the graphics card and set the recommended screen size for this. The settings can of course be changed.

Point cloud settings

For input of point clouds to the drawing there is now a default setting for how large it should be displayed. It is possible to adjust the characteristics of this.

Import/Export

The system settings for import / export is now possible to specify character encoding for the export of text files. It is especially applicable to exports of MapInfo files with different character encoding.

Co-ordinate system, Height system

In the coordinate system settings, it is now possible to specify a separate height system. This makes no automatic transformation but marks the file with the height of the system (and the coordinate system in the plane) with this information in order to prevent confusion when importing files.

Decimals and units

There is a setting for the device used. Both of lengths, areas, volumes and weights can be different entity. The standard units are meters, m², m³ and ton.

Point info

In the system settings for point info is the same as before. However, it is now only a default setting for the point info. If changes is made in a drawing, this will be changed and saved in the drawing and not affect other drawings.

Snap

Settings for the new snap command Apparent snapping that can be included in the automatic snapping.

System files

Attribute

Attributes can use groups for easier handling when you have many attributes. The groups are then used every time you have an attribute list. In the attributes, you can now paste data from the clipboard.

Attribute handle hyperlinks, add the http link to an attribute and you will automatically create a link.
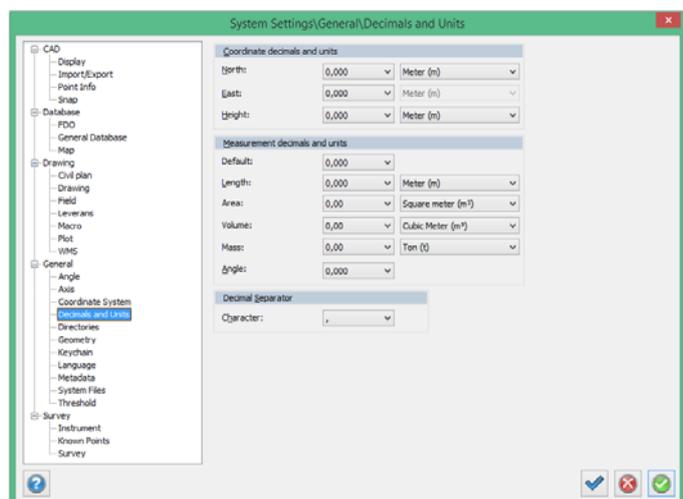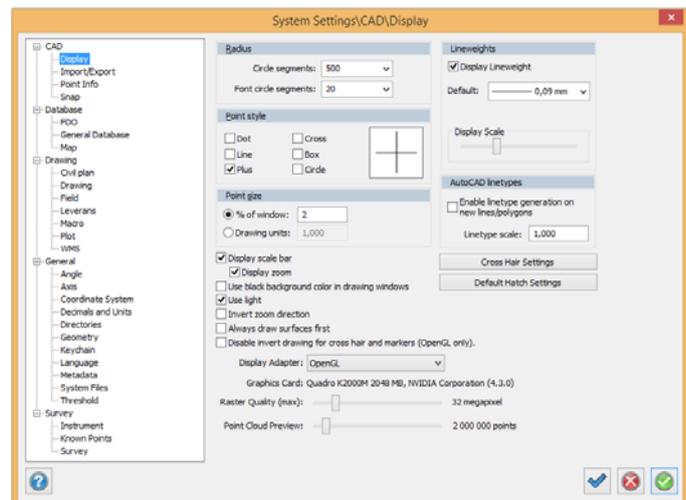
Line types

Line types with symbols

Now you can add symbols on line types. These symbols can be set in a plurality of ways, for example, be placed on each node in the starting end, the end point of the interval and can be rotated relative to the line or in any other manner. So it is possible to create line types that work for stairs, for all kinds of lines where symbols to be put on the nodes, and many more examples.
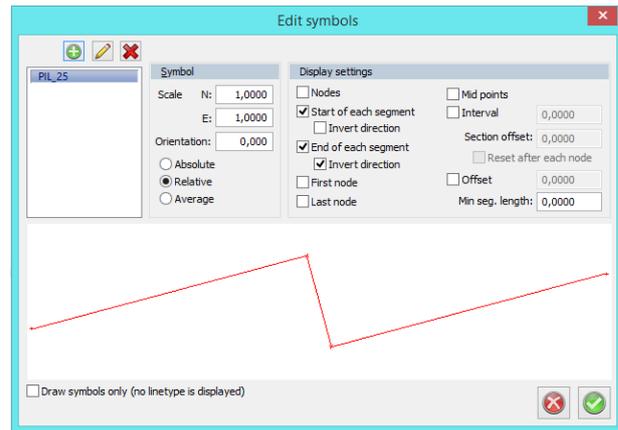
Advanced settings, line types

Here you enter if you do not want to view the line all along the line, but you can set it not to appear in the starting and / or ending point. For example used on the roof when the building is photogrammetrically measured.

During advanced setting can also function to specify another line type name when exporting to AutoCAD.
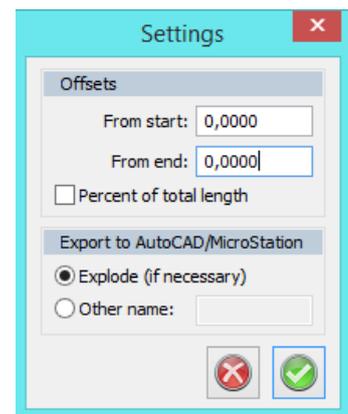
Code table, point type info

The code table have a function for polygon in Point type.

Material

In Topocad 16 is a material list. It can be added and changed. It is saved as a system file with the extension .tmlx (or saved in a common system file). You can add material to solids, to areas of the section template and to different calculation functions in the code table. Is there material on a solid also calculated the weight of the object.
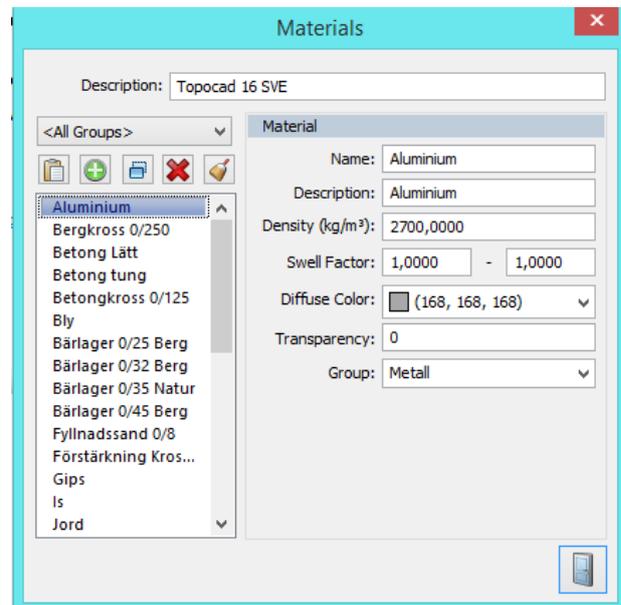
Product codes

Product codes can be specified on some types of items, particularly in cross-sectional section templates. These codes are included in volume report for solids. The product codes are made BSAB 2.0 and can also be used for AMA codes.

TOPX, drawing

News in Topocad 16 which we associate to the TOPX CAD drawing.

View point information

Drawing | Display | Point Info, shortkey Shift + F2

View point information is a function that displays point code, Item description, height and / or Point Id at a point (or point in a line). The information appears with settings for delta measurements from point insertion point and the text size. Previously these settings was made in systemsettings. Now this is redesigned so that the default setting is on the system level, but as soon as a change has been made in drawing it stores this information in the drawing without affecting the system settings default.

Labeling

Misc | Label, Shortkey Ctrl + Shift + K

The function label puts on a text, attribute or symbol along a line and has now been expanded with two functions. Not only you can enter the text to be on the nodes, and you can specify a start section.

Freeze layer

Design|Tools|Freeze not selected layers, Right mouse – Freeze not selected layers

The command turns off all the layers that are currently not selected. Select the objects whose layer you want to see, activate the command. Layers are frozen. A quick way to freeze data you do not need to see.

Create layer collection from the layer manager

Drawing | Properties | layer manager, Short key Ctrl + 1

In the Layer Manager is a command that creates a layer collection from the actual settings in Layer manager of visible layers.

Break line with line

Drawing | Modify | Break, Short key Ctrl + B

Improved break command as one can now break a line with another line, and choose which line it will break and also which height you want.
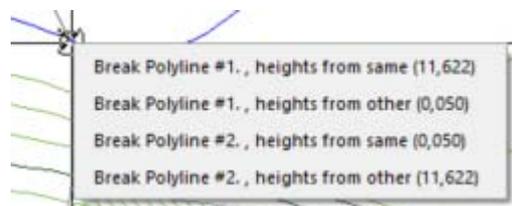
External references in one and the same color

Drawing | View | External References

When using external references, you can choose to have the entire external reference in the same color. Makes it easier to distinguish what is what.

New functionality in Slope hatches

Misc | Other | Slope Hatch, Short key Ctrl + H

Slope hatch command has got extended functions. First, one can now use more lines in both the upper and lower line. Secondly, one can not fool the command when the lines are located at different heights, which always selects the top line as the upper edge.

There are also function to have double long and short lines.

New snap command

Snapp command Apparently intersection is a new snap command. When you have two objects (lines, radius) as mouseover of their endpoints, gets a pink mark on them and then go to the point where the cut should be. The intersection is drawn and can be snapped on.

Multiple sheets

Sheets|Create|Multiple drawing sheets

The function creates a number of drawing sheets covering a larger drawing space. Draw the total space, specify a sheet template and scale. Estimated number of drawing sheets are displayed. You can also enter an overlap.
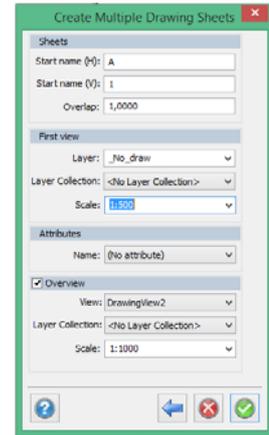
Gtrans 64 bitars

Drawing | Modify | Transform

Gtrans is now in 64-bits version.

External command from clipboard

When data is selected in the drawing can be copied to the clipboard and then pasted into another drawing (or the same). The command can now also use an external call to the exe file if you want to use the cut/paste for handling.
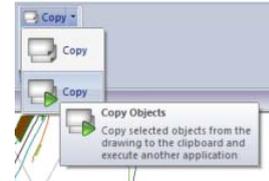
Enhanced functionality in pile protocol

The pile protocol has enhanced functions. In addition to handling solids, we have supplemented that comparison can be made at the top, bottom or fixed height. The requirement attribute is released.

Convert text to points

Misc | Other | Text to points

A new command where texts with the height specified can be converted into points with the height. You choose the insertion point, and if the height to be taken from the written text or height.
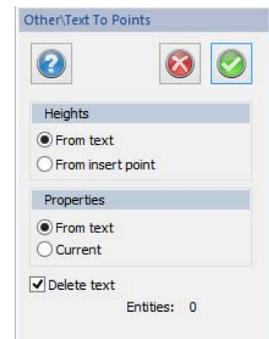
Grid in the edit as text

The function of the Edit as text has been complemented by being able to expand and collapse objects so that only one point of each line (first) is shown with the line attributes.

|	Typ	Punkt Id	Punktkod	North	East	Z-Koord	[Area]	[Längd 3D]	[Längd]
1	⊞ Linje, 4 pktr., 7103 - 7106	7103	GP	6591139,358	701621,919	12,788	2439,8	202,1343	201,4125
2	⊞ Linje, 6 pktr., 7107 - 7112	7107	GP	6591181,970	701540,898	11,161	1590,8	165,1053	164,3386
3	⊞ Linje, 4 pktr., 7052 - 7055	7052	GP	6591089,257	701531,899	15,986	4797,3	283,2242	283,0973
4	⊞ Linje, 6 pktr., 7056 - 7061	7056	GP	6591127,874	701470,410	16,061	4683,3	266,8265	266,6752
5	⊞ Linje, 6 pktr., 7062 - 7067	7062	GP	6591177,591	701470,798	13,223	4266,1	256,7555	256,5604
6	⊞ Linje, 6 pktr., 7082 - 7087	7082	GP	6591117,552	701460,313	16,233	3514,1	264,4997	264,3890
7	⊞ Linje, 4 pktr., 7078 - 7081	7078	GP	6591038,597	701456,392	15,507	3395,8	237,9914	237,9471
8	⊞ Linje, 4 pktr., 7048 - 7051	7048	GP	6591076,956	701676,111	16,291	3441,1	245,4620	245,3019

Reference points

Create reference points: *Design | Create objects | Point References*

Edit reference points: *Modify | Edit | Point References*

Point Reference is a new type of object that means that a point connects a number of lines, closed lines or polygons.

The function connects a number of points on each other to a point and then it is not possible to split the objects from each other. The point is edited as a point.

Modify the command enables adding objects or subtract items from the point.
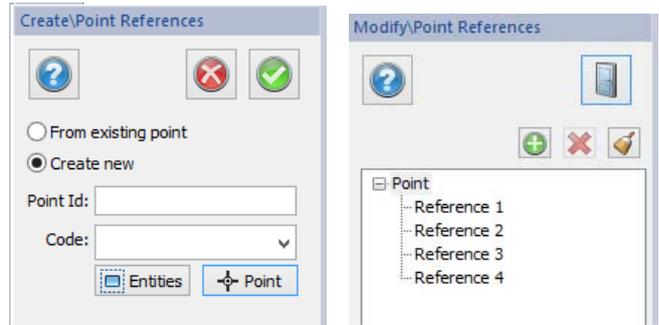
Create ellipse

Design/Create objects/Ellipse

Topocad now handles ellipses. By specifying the insertion point, pointing out the direction and enter the large and small radius obtained an ellipse.

Rotate command

Drawing/Modify/Rotate, Right mouse, Short Key Ctrl + Shift + 3

Rotate command has been extended by rotation in three dimensions. Now the rotation take place in 4 axes, X, Y and Z as well as any that may be pointed out. Note that it is the axis specified, ie, around the axis that the object is rotated
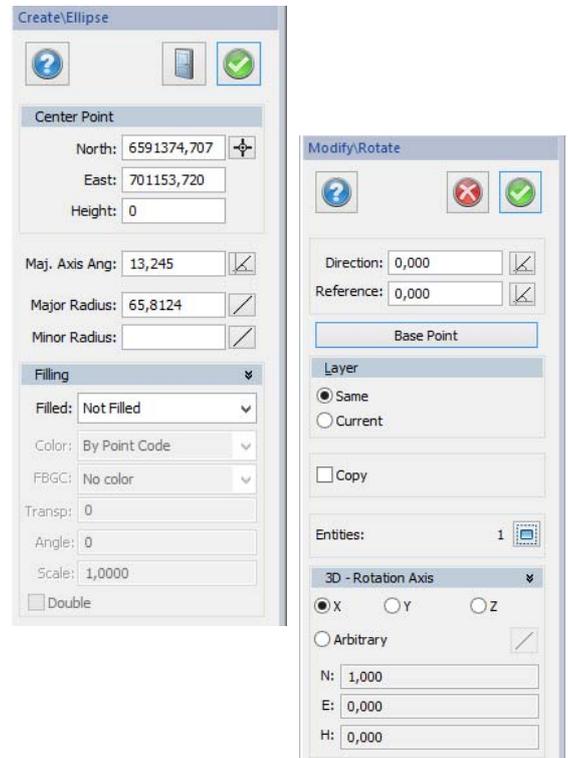
Transformation

At export of KML files it is now possible to transform data both Gtrans and Proj4.

Database adapters

FDO

Color according to the View layer is a new feature.

ESPA

Now it is possible to rotate the map display according to the setting ESPA use when working with link to the Espa.

Solids

Topocad 16 handles solids. Solids is a complex 3D volume of a number of types of volumes. In principle, any volume may be created. In Topocad these solids are created in the drawing by a number of commands, and can be solid objects measured in using the calculation functions in the code table and finally created solids through section templates and calculated sections. Topocad also handles meshes which are a type of simplified solids which can be likened to a closed terrain model.

Create solids

Design | Create object | 3D-Solid Short Key Ctrl + Shift + 3

Solids can be created by:

- • Cubes
- • Wedges
- • Pyramids
- • Cones
- • Cylinders
- • Spheres and
- • Torus

What dimensions are listed are slightly different on the type of object. Generally indicated insertion point, scale (size) but also the direction of tilt. All solids are given location, color, transparency, and possibly material. Specified color materials can be retrieved from this.
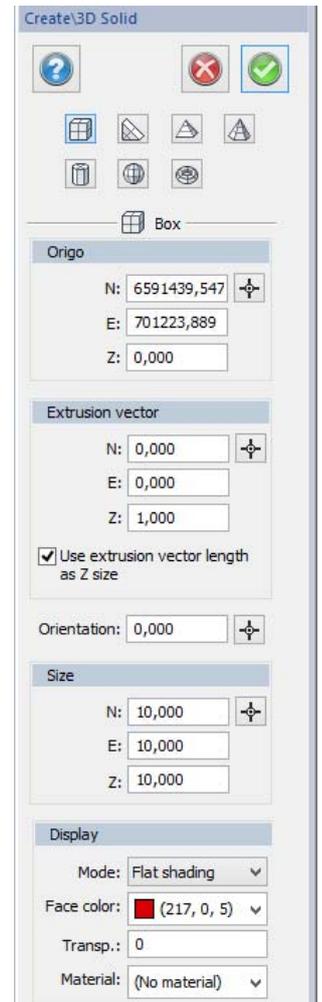
Sweep

Design | Create objects | Swipe   Short key Ctrl + Shift + 4

The command creates solids of a road and a cross-sectional profile. By choosing the path, cross-sectional profile and possibly an insertion point on the cross section profile provides a solid along the way.

One requirement is that the road does not have any break along the line (note 3d) and that the cross-sectional profile is closed. A polygon can be used as the cross-sectional profile.
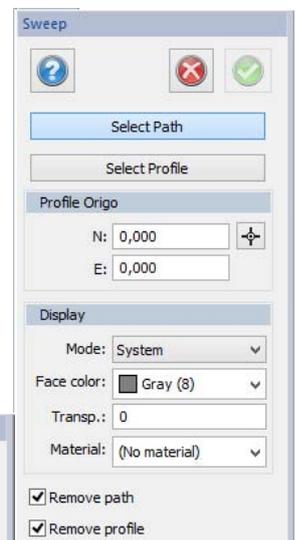
Extrude

Design | Create object | Extrude Short key Ctrl + Shift + 5

The command lifts a cross-sectional fixed length.

The function lifts always straight up along Z in the plane.
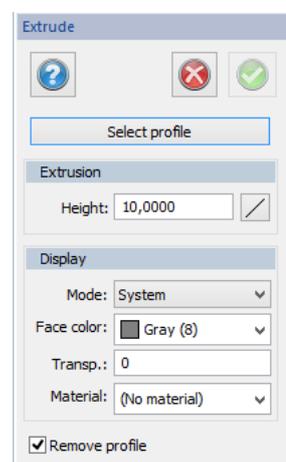
Revolve

Design | Create object | Revolve Short key Ctrl + Shift + 6

The command rotates a closed object around the selected axis and forms a solid by this. This need not be a full revolution, angle can be specified.
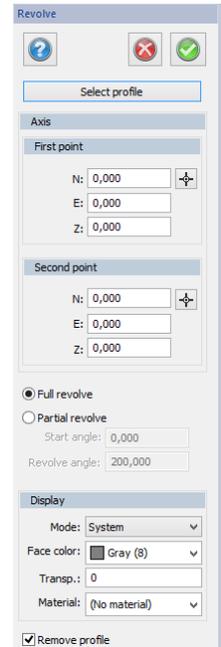
Loft

Design | Create object | Loft Short Key Ctrl + Shift + 7

In this command, enter a number, at least two cross-sectional profiles located at different heights. Point out the cross sections in the order you wish to create them in. Topocad creates a solid of the cross section you specify and in that order.
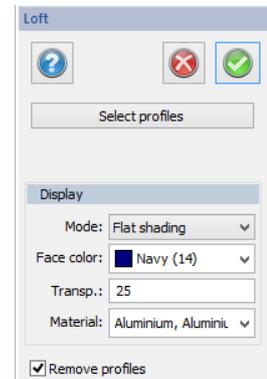
Create mesh

Design | Create object | 3D-Mesh   Short key Ctrl + Shift + 7

Mesh can be created as:

• Cubes

• Wedges

• Pyramids

• Cones

• Cylinders

• Spheres and

• Torus and supertorus

Meshes are somewhat simpler than solids in design. In Topocad we prioritize solids. It is, however, so that at certain import and export to other formats, the meshes will occur.
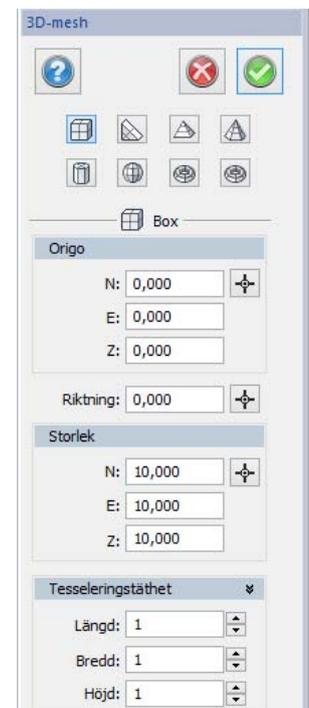
Import of ifc

File | Import – ifc

Ifc-format is the format used for Bim data and it uses only solids and has numeric metadata.

IFC metadata to solids

Modify | Tools | BIM data

This command copies a number of IFC metadata to Topocad attributes.

Calculation Functions for solids

Home | Systems | Code Table

In the code table calculation functions are a number of features built directly from the measurement to create solids.

The following 3D calculation functions are:

• 3D horizontal beam (curb, wall, etc.)

• 3D cylinder (pillar, cylinder, pipe)

• 3D columns (pillars, square beam)

• 3D pole (pole measurement)

• 3D surface (surfaces, walls)

• Horizontal sloping pipes (tubes)
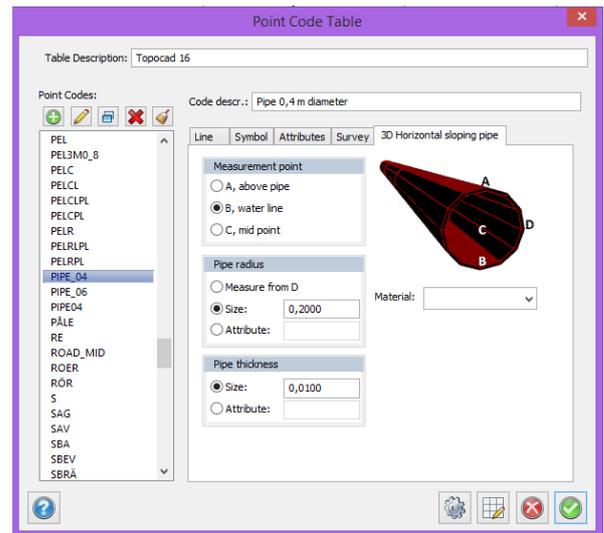
Sections and solids

Calculation of the sections creates solids and this begins with the section template. In the template section, objects can be swept along the path indicated, such curbs. It is possible to specify 3D objects located along the road at a regular interval as lighting poles.

Finally is solids created of the areas, indicating in section template, for example, asphalt layer, superstructure layer, prop strips, etc.
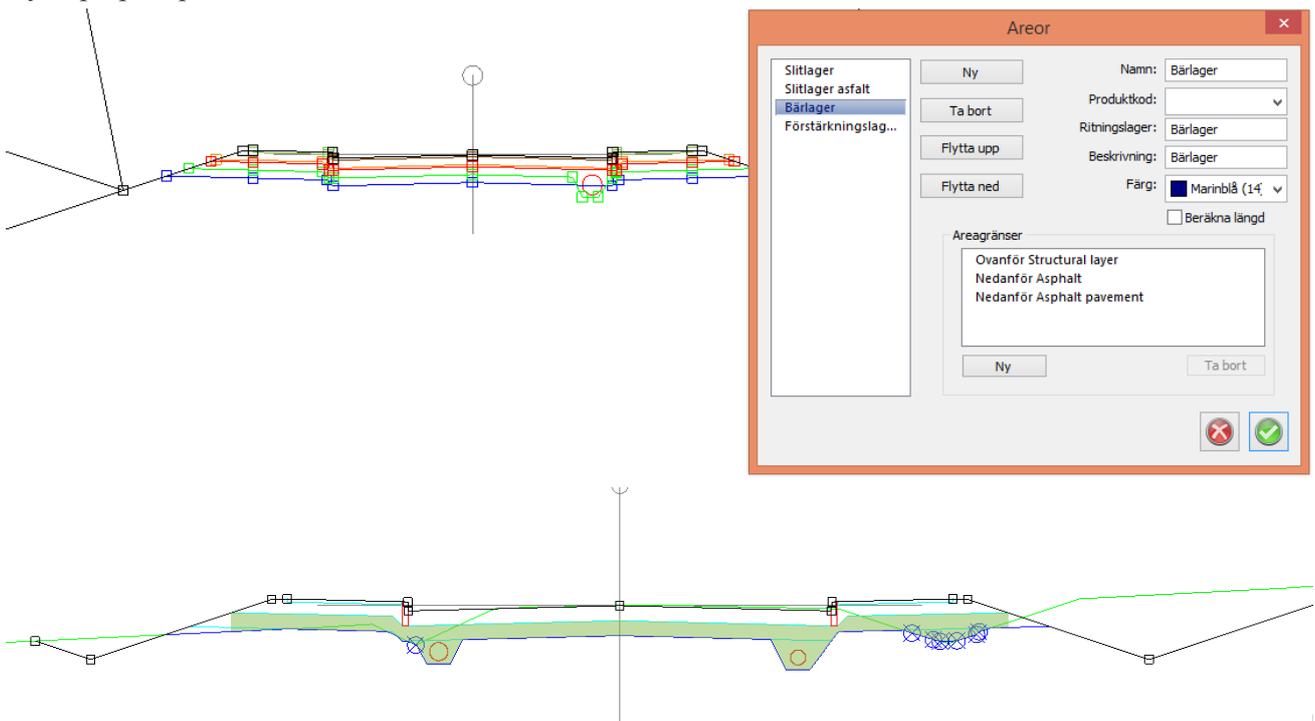
When importing calculated sections to a drawing you get the choice of which items you want to import to the drawing. They are divided into lines, sections, section objects (eg curb stone) and areas (solids).