

devBLD Survey tools

Quick Start Guide v1.0

Installation

After you have downloaded the package extract the zip file. The extracted folder contains the installer .msi file and two other zipped folders. These contain a template file with some resources already set up for pipes, manholes and point items and a trial dataset with an empty Revit project with coordinates set up, a config file, a .csv file containing some sample data and another Revit project containing the results you can expect after you have run all of the tools.

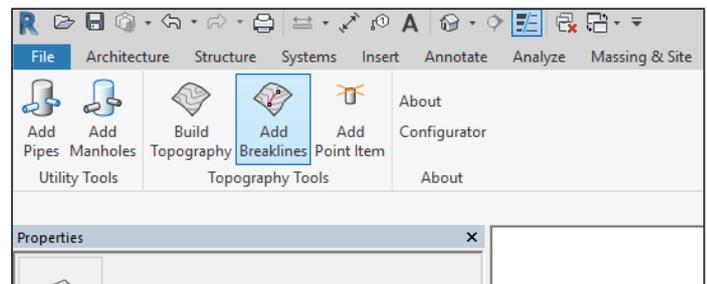
Double click the installer and follow the instructions, then launch Revit. You will get an alert that a new plug-in has been installed. You need to give permission for this to run if you wish to use the tools. Select 'Always Load' if you do not wish to be prompted each time you launch Revit. Revit will now launch with the devBLD tools plug-in loaded.

If you have a problem during this process

Using the trial data

Open the file named trial_model.rvt you will see that the empty file has the survey point at 0,0,0 and the project base point located close to where the trial data is located. Switch to 3D view.

Select the devBLD tab (it will be towards the righthand end of the tabs at the top of the window. The tools palette will appear.

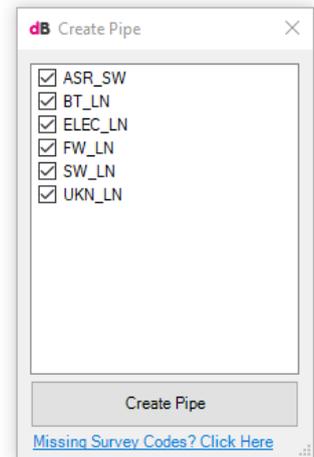


Pipe Creation Tool

Run the add pipes tool by clicking the first tool in the palette.

A file dialog will open. Navigate to where you unzipped the trial data and select the file named trial_data.csv.

A dialog will open showing the instrument codes that will be used to create pipes when this tool is run. Click 'Create pipe' and the tool will run. You should now see a series of services as they have been found in the .csv file. The pipes are built at their surveyed level, so pipes that are at depth will be at their true level, pipes where depth was not found and were surveyed at the surface will appear on the ground level.

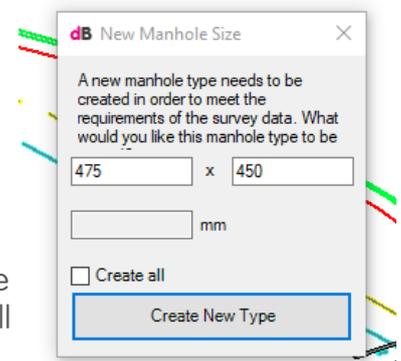


Manhole Creation Tool

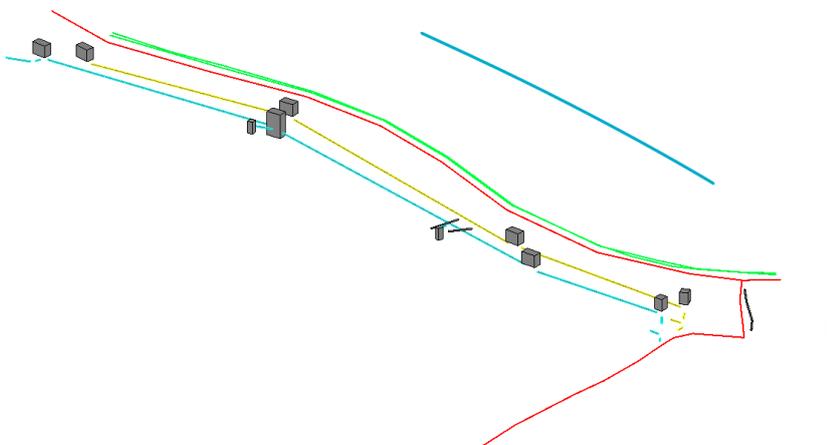
Next run the add manholes tool.

A file dialog will open in the same location you last used. Select the file named trial_data.csv.

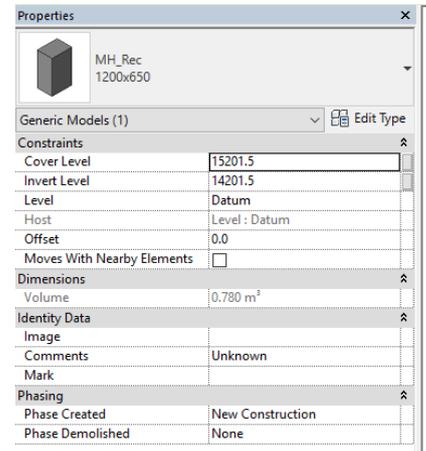
As before a dialog will open showing the instrument codes that will be used to create manholes when this tool is run. The manholes are created with default depths. Click 'Create Manholes' and the tool will run.



A dialog will open indicating that new manhole types need to be created. Either step through these by clicking 'Create New Type' or check the 'Create All' box to create any type sizes required.



Invert levels can be manually set if they have been surveyed by entering the surveyed level above Datum from your survey in the manholes properties panel. Try editing some of the manholes this way.



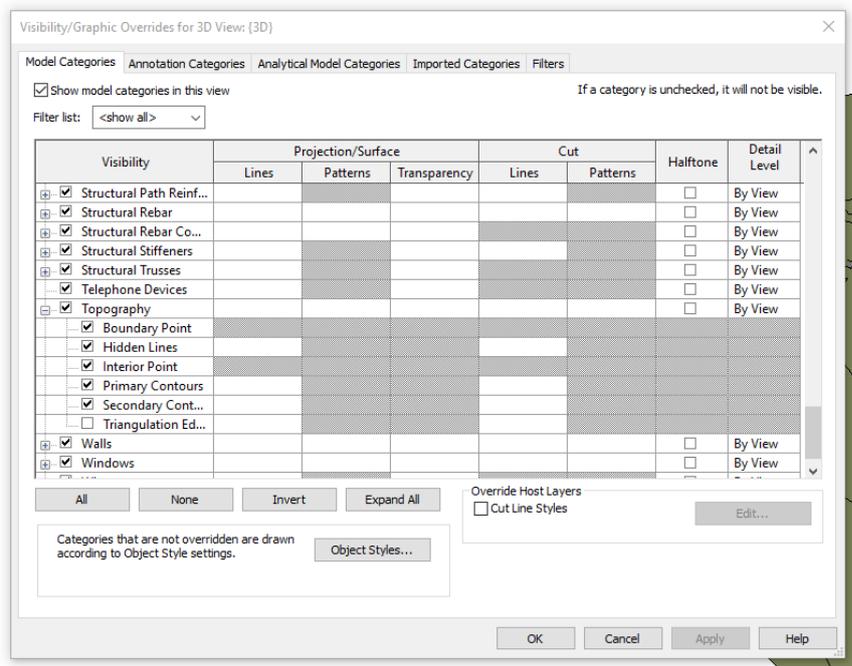
Topography Tool

Next run the add topography tool.

A file dialog will open in the same location you last used. Select the file named trial_data.csv.

As before a dialog will open showing the instrument codes that will be used to create points for the toposurface when this tool is run. Click 'Create Topography' and the tool will run. The surface will be created.

Now click in the view away from any objects so the view's properties are displayed. Click the edit button for Visibility/Graphics Overrides and scroll down to Topography, expand the feature, turn on Triangulation Edges.



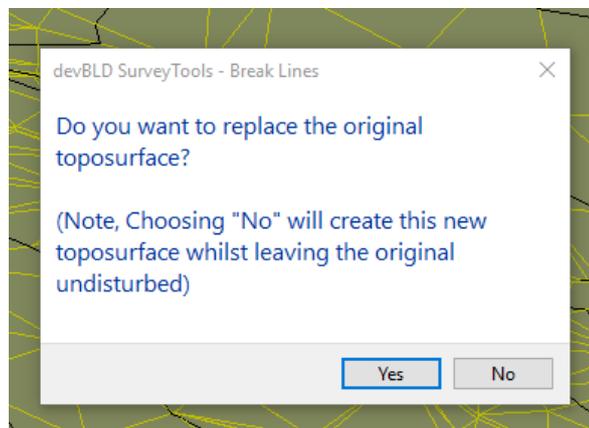
This will allow you to see the triangulation of the toposurface. You can see the the carriageway and kerbs are not clearly defined because of the way Revit interprets the triangulation.

3D Breakline Tool

Now run the add breaklines tool.

A file dialog will open in the same location you last used. Select the file named trial_data.csv.

As before a dialog will open showing the instrument codes that will be used to add points along the strings of points for the breaklines when this tool is run. Click 'Create Topography' and the tool will run.



Next click on the toposurface you created before to enhance the surface. A dialog will open offering a choice to delete or keep a copy of the original toposurface. Select Yes and the old surface will be deleted as part of the operation.

Take a moment to look at the enhanced toposurface. You can see clearly the line of the carriageway and the culvert running next to it.

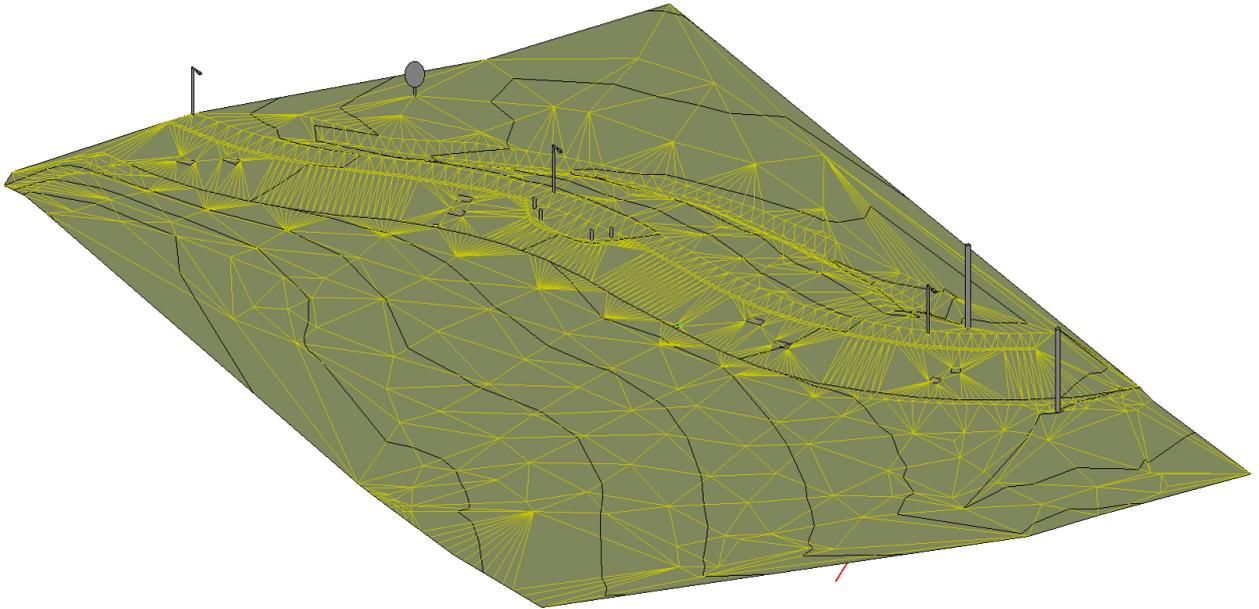
Point Items Tool

Finally run the point items tool.

A file dialog will open in the same location you last used. Select the file named trial_data.csv.

As before a dialog will open showing the instrument codes that will be used to create points for the point items when this tool is run. Click 'Create Point items and the tool will run.

Lamp posts, telegraph poles, bollards and a tree will be added.



The model with pipes, manholes, toposurface and point items, ready to be split into regions, point items rotated and other features added.

For more information go to our website <https://www.devbld.com>