# Solar obstruction object

PvDesktop can store buildings and trees as solar obstruction objects. Both data sets are shapefiles (two dimensional). This requires height data for buildings, and height and shape for trees. The next paragraph describes how to assign and work with this data.

1 Building data

To assign building height and compute the affected area (the building's shadow) the user can do the following:

1. Open the Solar obstruction section
2. Click a row in the table to select an active building
3. The selected building is highlighted on the map
4. Assign building height
5. Click the 🖫 button to save the data
6. Click the 🏠 button to perform a shadow analysis
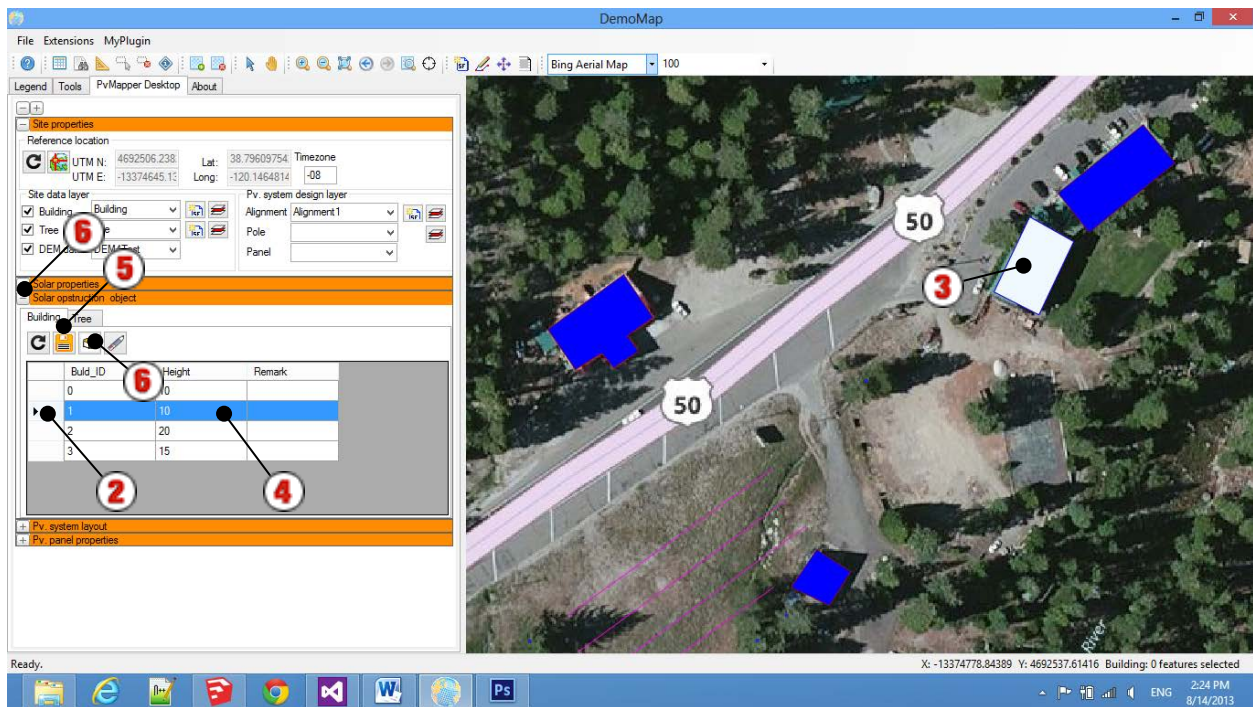
7. The shadow analysis result are shown on the map as a GIS layer
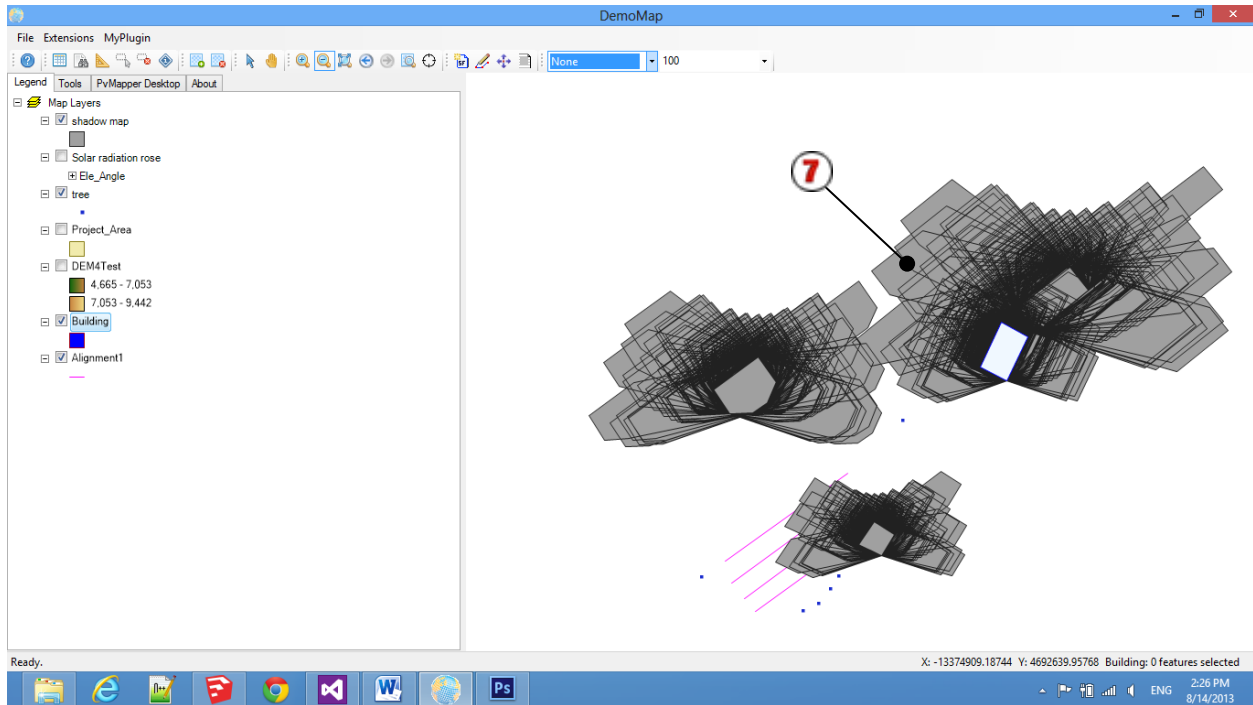
The user can display the shadow as a transparent layer by using layer properties and overlaying it on the online map.
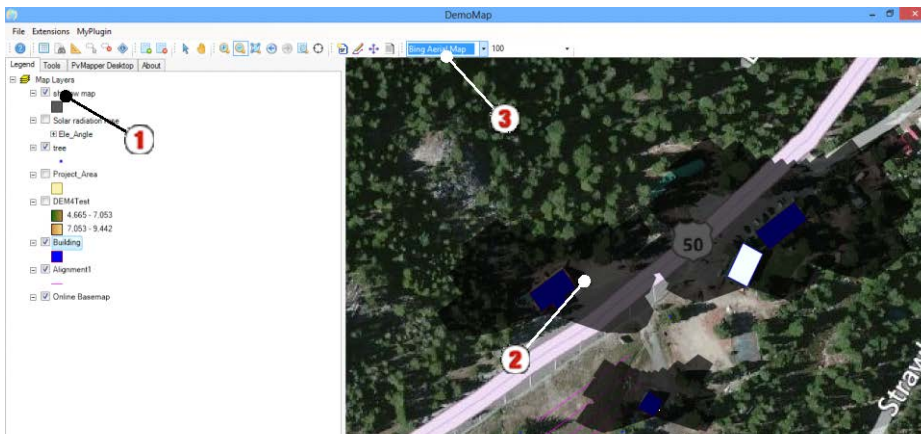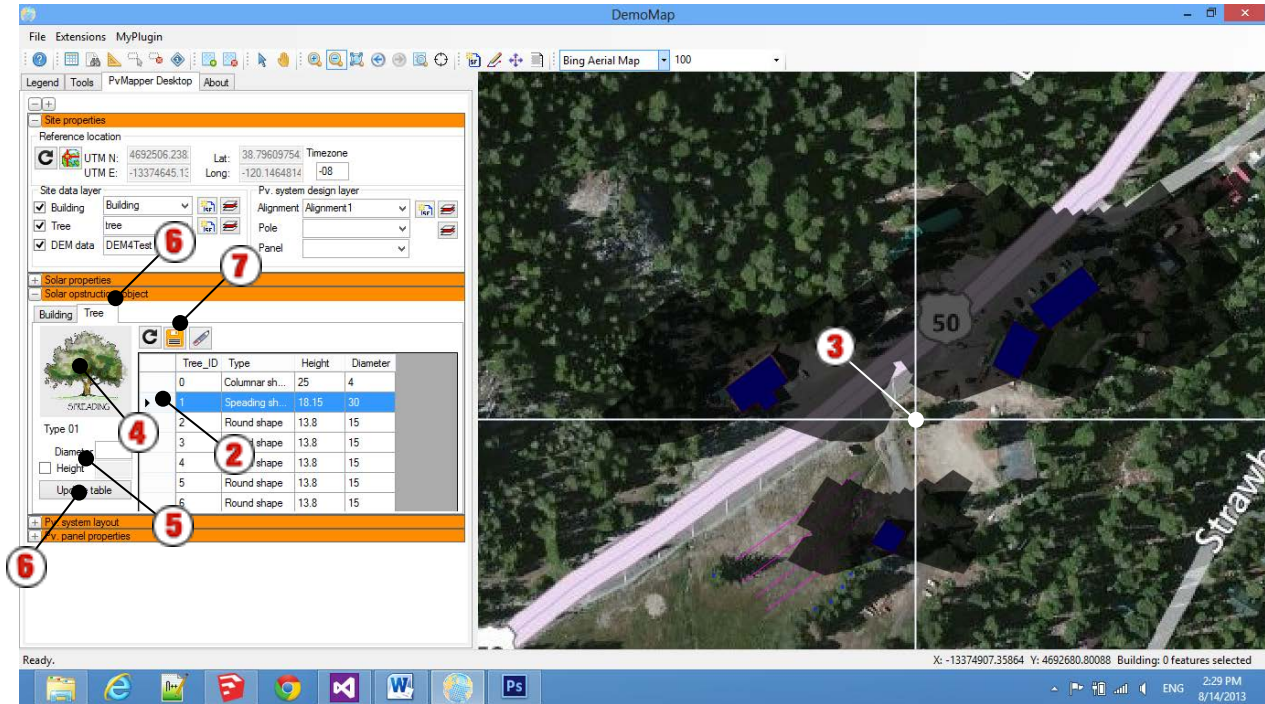

2 Tree data

Tree data needs 3 important parameters: tree height, diameter and type of tree. To assign their value the user can do the following:

1. Click the tree tab

2. Click a row in the table to select an active tree
3. The selected tree will be shown on the map
4. Click the tree picture to select tree type (right-click shows the previous selection) look at table xx for the 10 types of PvDesktop trees.
5. Assign tree diameter; for this step the user can automatically assume tree height or manually assign tree height.
6. Click update data
7. Click the 💾 button to save the data

After saving tree data PvDesktop will show tree symbols as green trees.

Table 1 Tree forms detail

Symbol	Sample picture	Name
SPREADING		Spreading form
PYRAMIDAL		Pyramidal form
ROUND		Round form
OVAL		Oval form
CONICAL		Conical form
VASE		Vase form
COLUMNAR		Columnar form
OPEN		Open form
WEEPING		Weeping form
IRREGULAR		Irregular form