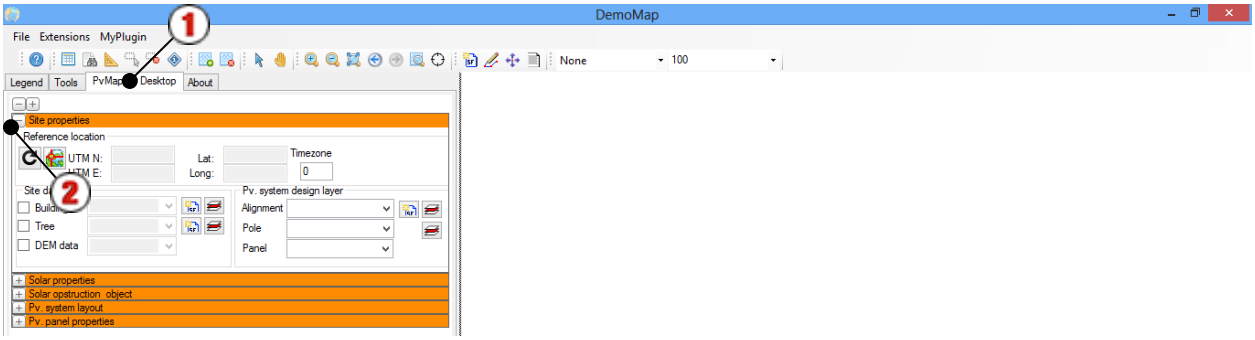
Site data

Site data is a data set that refers to a site's location. To open it, the user can click the **PvDesktop** tab ① and then open the Site properties section ②. The section will open to show the site data, as shown in picture below. Site data consists of:

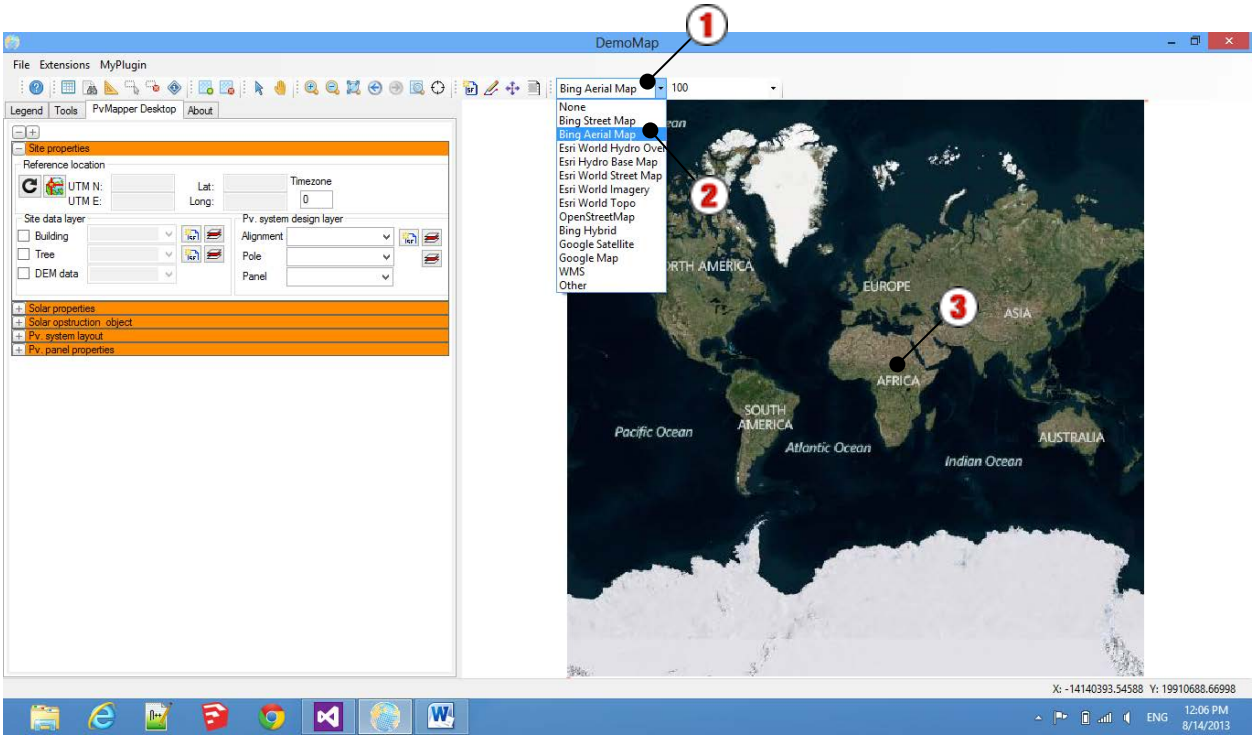
1) Site reference point (LAT, LONG / UTM E,UTM N),
2) Time zone
3) Solar obstruction object data (Building and tree shapefile, Optional data)
4) Solar system alignment design (Line shapefile)
5) Pole location data (Point shapefile)
6) Photovoltaic panels data (Polygon shapefile), and
7) DEM data (Optional data)



1 Online map

Online maps are streaming downloads from the selected map service host. This map can selected by the user. The following steps show how to load the online map.

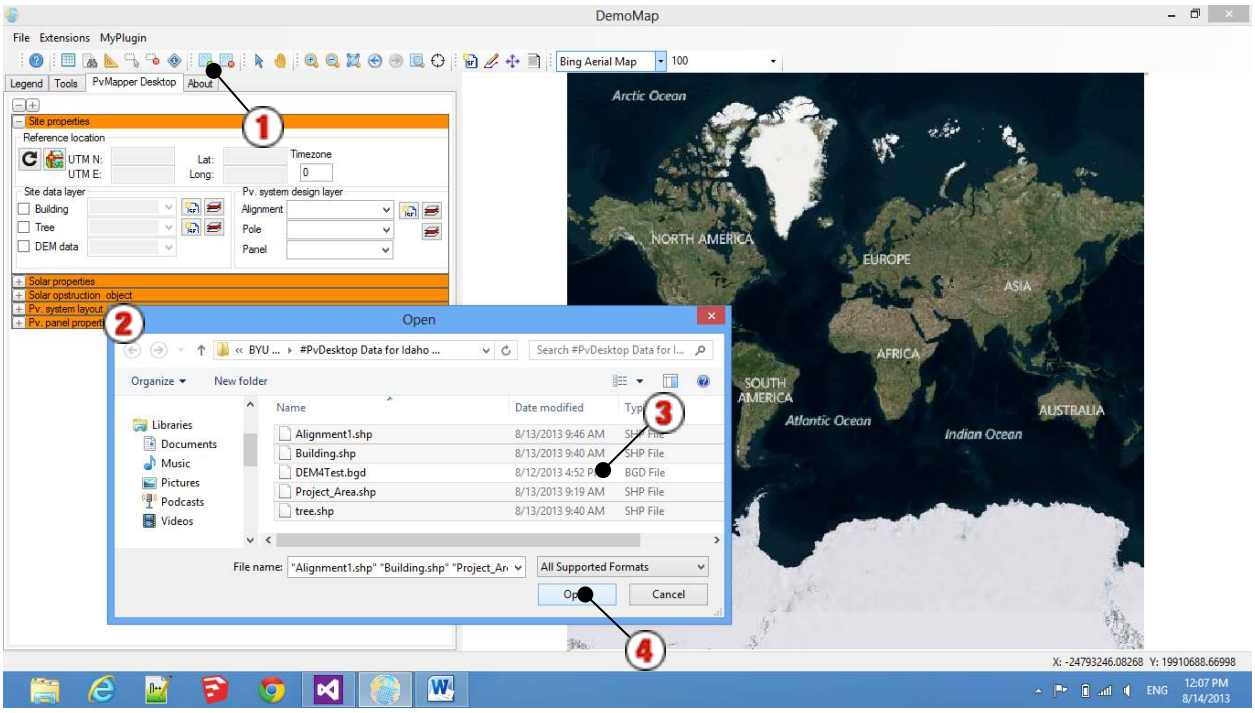
1. Click on the drop-down menu to select an online map service.
2. Select online map source
3. **PvDesktop** will show the selected map



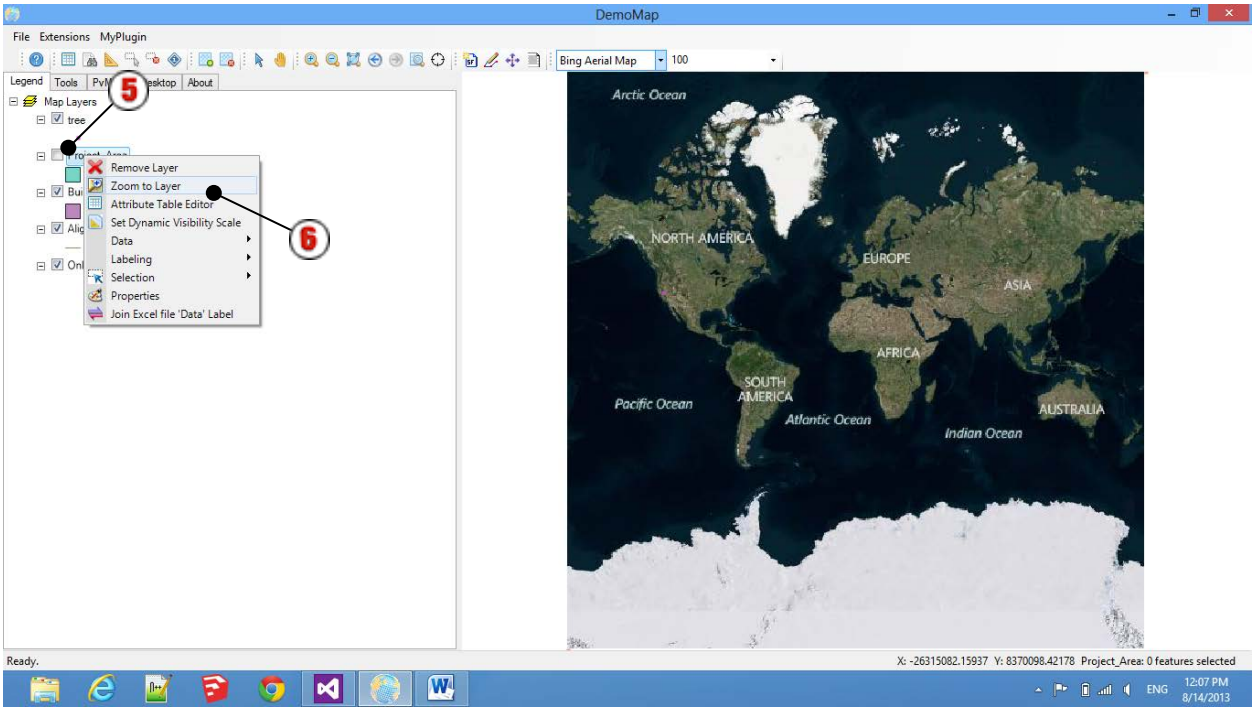
2 Shapefile data

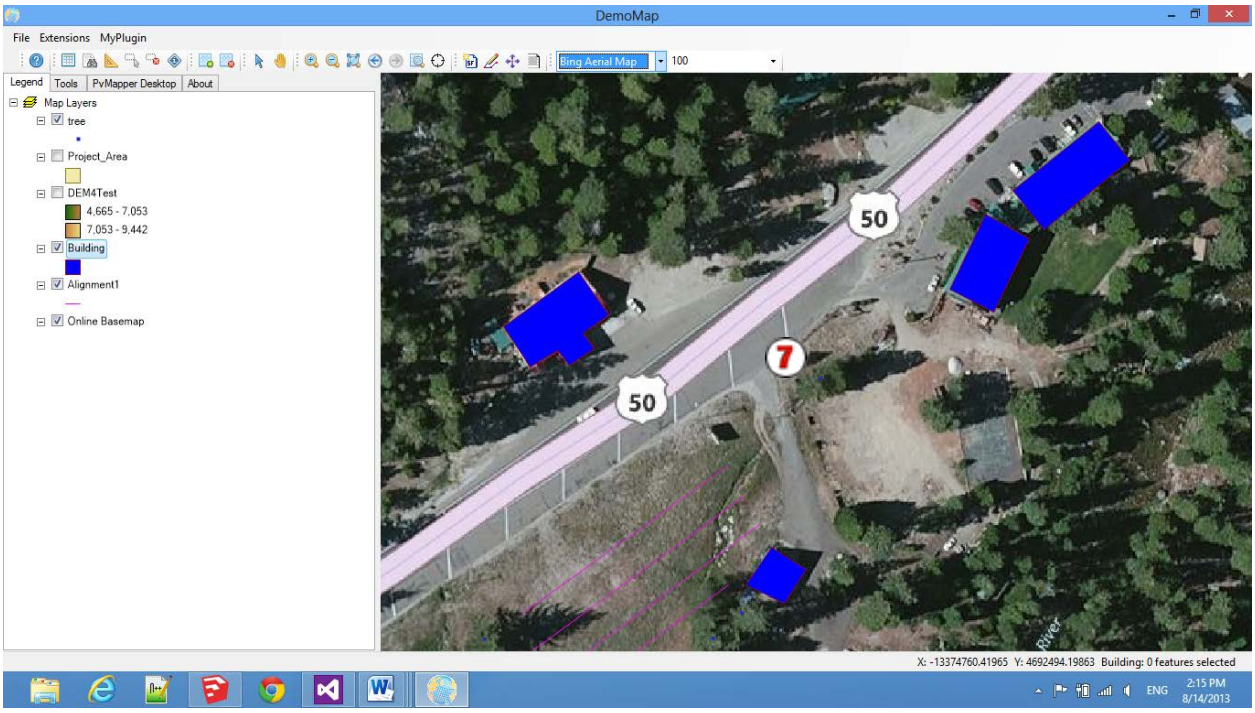
PvDesktop is a GIS application, which means that it works with GIS data (shapefile). To design the photovoltaic system the user can create a new shapefile (see 4) or use an existing shapefile. If the user has an existing shapefile, the user must import their shapefile to **PvDesktop** first. The following steps below show how to add a shapefile to **PvDesktop**:

1. Click the add layer button .
2. **PvDestop** will show an open file dialog
3. Select the Shapefile (*.shp)
4. Click open



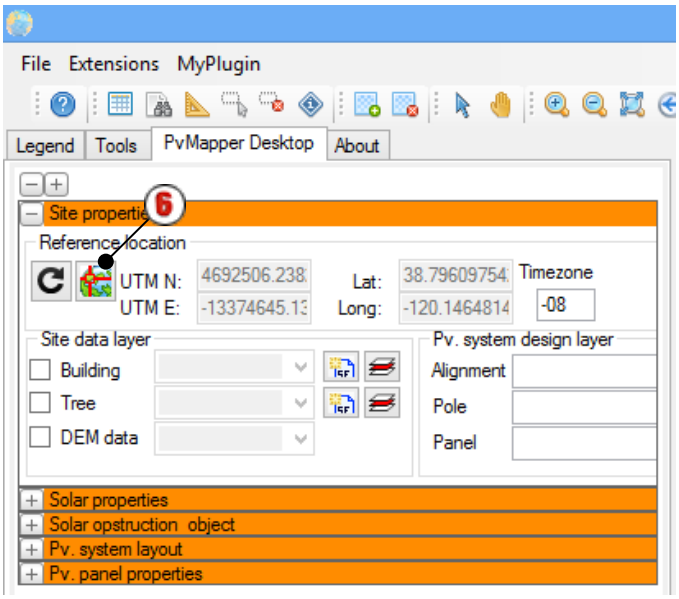
After adding a shapefile to PvDesktop, all added data will be displayed in the legend tab. The site boundary is too small to see when when the map is zoomed out, as shown in the figure below. The user can quickly zoom to the site location by right click on a layer name ⑤ and then selecting ⑥ zoom to layer then ⑦ zoom to contain the extent of the selected layer.

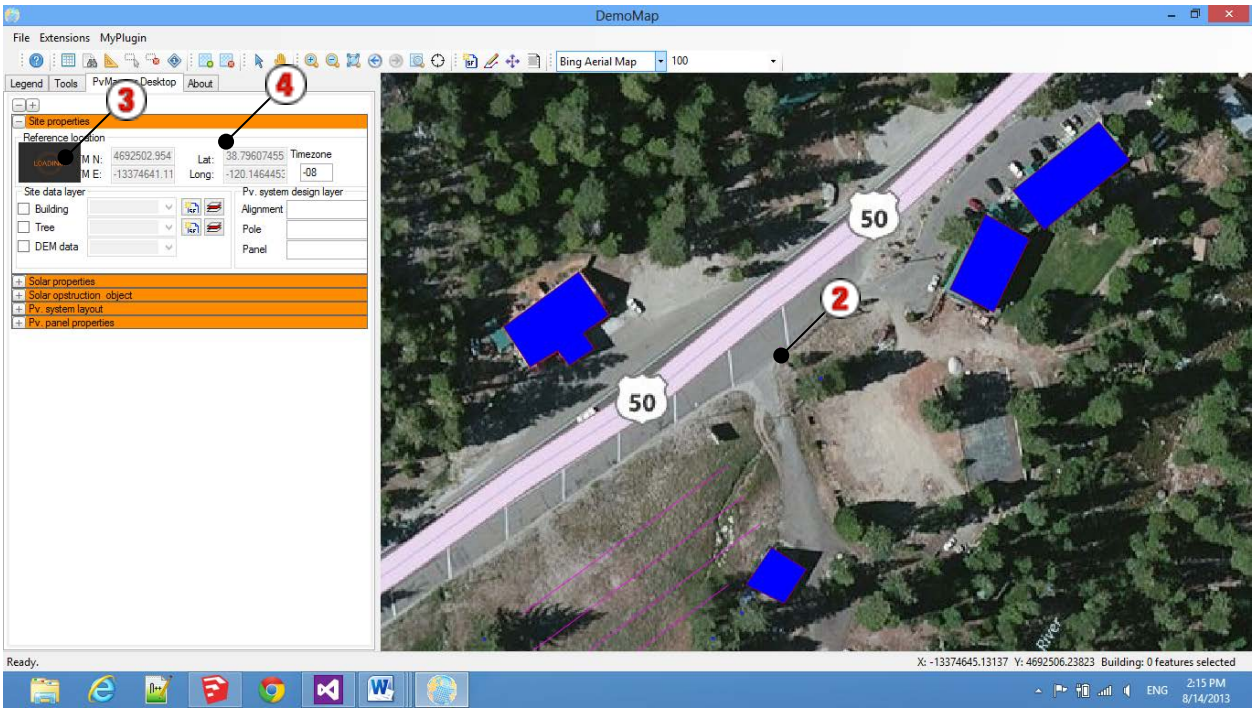




3 Reference location data

Switch to the **PvDesktop** tab and set a reference location. Click ⑥the **Reference Location** button and then click anywhere ②on the map. A waiting symbol ③(black box that reads "**Loading..**") will appear while this loads. The loaded time zone and reference coordinates will be displayed ④ when it finishes, as show in the figures below.





TIP

The reference location systems have both LAT-LONG and UTM coordinate system. The project for PvDesktop is based on the first selected online map.

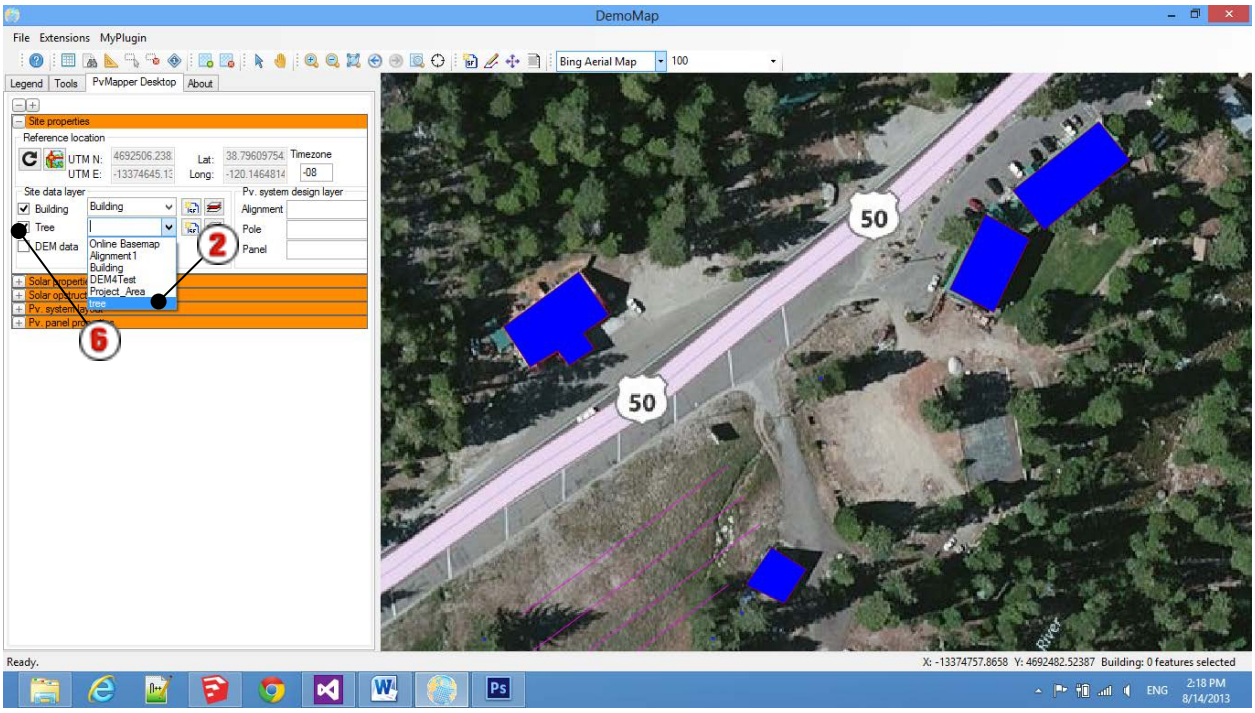
Note

Time zone data is a shapefile located in the PvDesktop plug-ins folder. The user can change the time zone value. Time zone data is used in the exported report to convert from GTM to local time.

4 Input data layer assignment

As mention before, Input layers for PvDesktop include Building, Tree, Solar system alignment, Pole locations, Photovoltaic panels, and DEM data layer. All input data need to be added to the PvDesktop legend first. To add the shapefile see topic 2. To assign a layer the user can do the following:

1. Click the checkbox for the assigned layer (Sample check at Tree data input layer)
2. Select a representation layer for Tree input data.



TIP

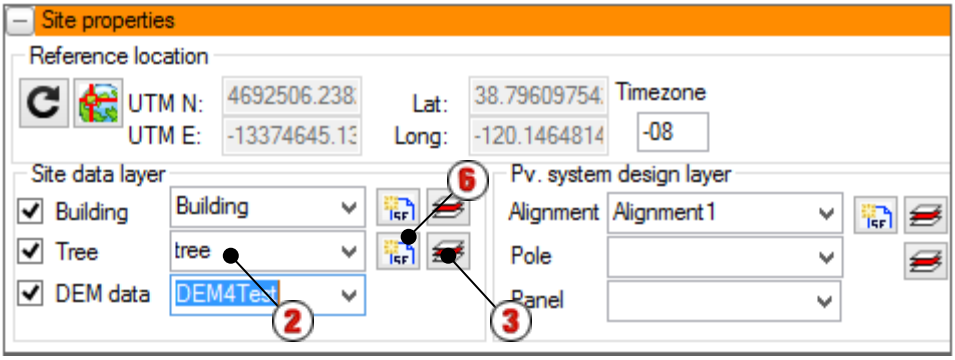
Sometimes the selected layer dropdown will display nothing. The user can click the Refresh button to reload the list of loaded layers from the map legend.

Note

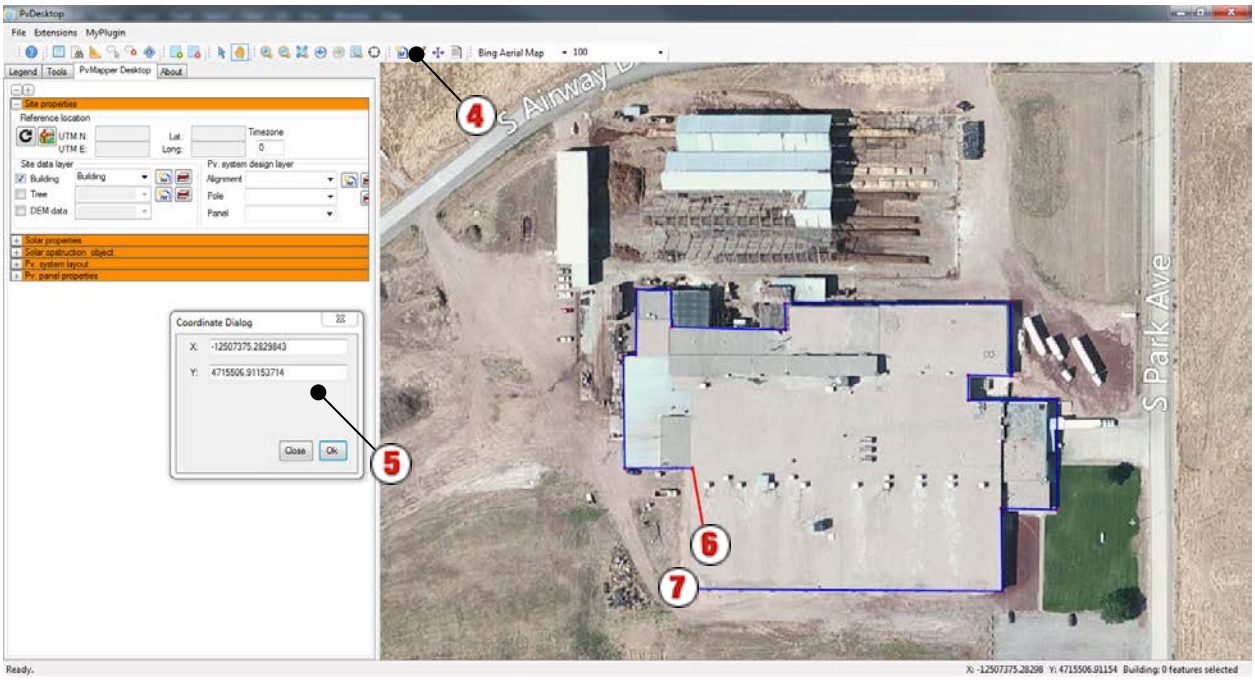
PvDesktop does not allow assigning shapefiles that lack important fields to represent an input data layer. For example, the Tree layer must have fields (Height, diameter, Type). If the assigned layer doesn't have these fields filled PvDesktop will generate a layer assignment error.

In the case that a new project doesn't have an existing shape file, the user can create a new shape file and correct input fields by doing the following:

1. Click the create new layer button
2. PvDestop will automatically create the layer and field structure
3. Click the select current layer button



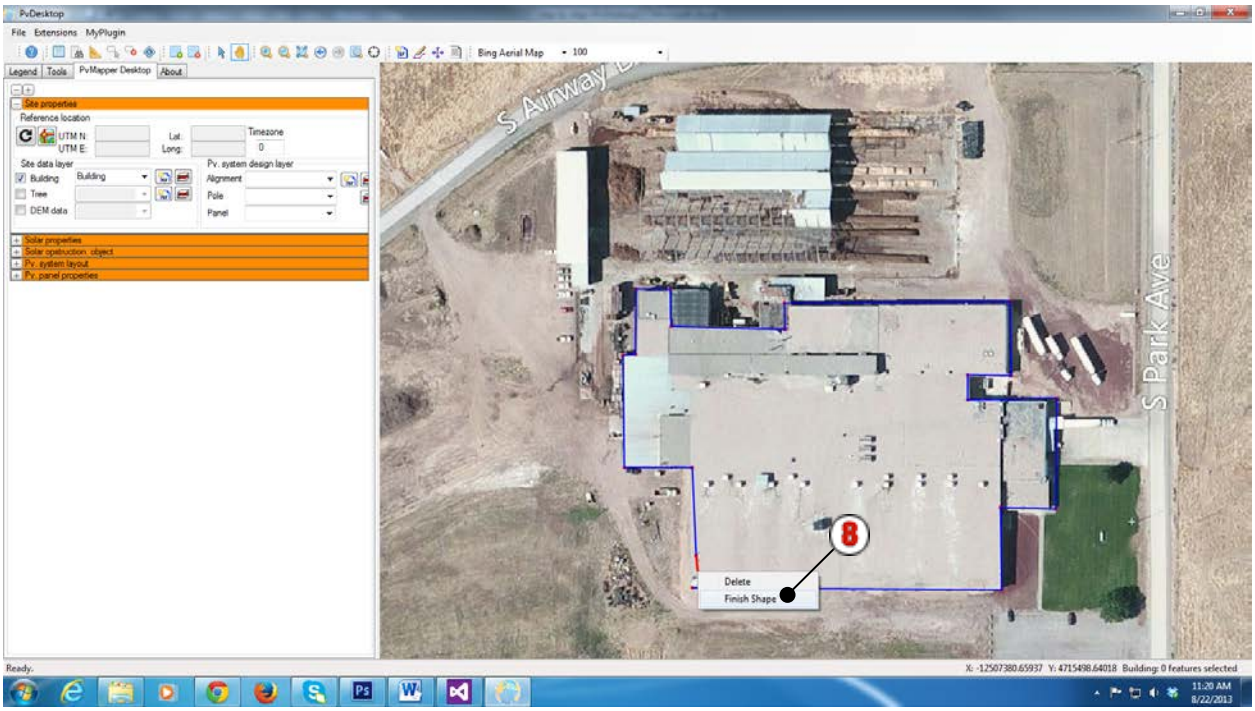
4. Click the add new shape button
5. PvDesktop will display the coordinate dialog
6. Draw a shape on the map to outline the obstruction
7. Finish the shape, then right-click



8. Select finish shape or delete drawing shape

TIP

The user can use other GIS program to create input data files (with the correct field structure).



Note

- Building data is a polygon shpefile.
- Tree data is a point shapefile.
- Pv. system alignment is a line shapefile.