

1.1 Opening GEOPAK Site

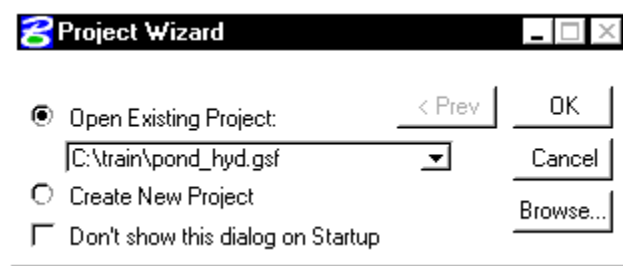
Step 1. Open the **dgn** (MicroStation design file) the pond was created in GEOPAK Site. Then invoke the **Site Modeler**. From the MicroStation menu bar, select **Applications > GEOPAK SITE > Site Modeler > Site Modeling**.

Or

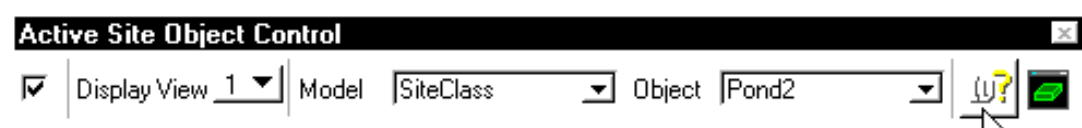


Step 2. Within the Project Wizard:

- Check **Open Existing Project**.
- Select the ***.gsf (GEOPAK Site File)** the pond was created in
- Select **OK**

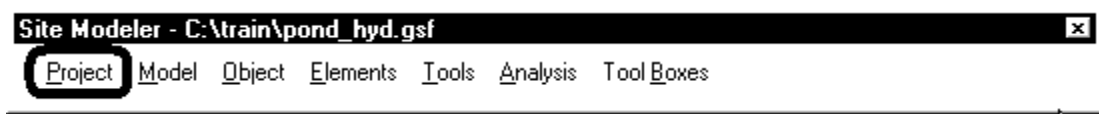


The Active Object Control toolbar shown below is defaulted to display the **Active Model** and the **Active Object** as depicted in the graphic below. In most instances GEOPAK Site will display both the **Active Model** and **Active Object** in the dgn file. You should dock this toolbar for ease of use and navigation. You can select the pond (object) you want to view.



1.2 Exporting Objects in Site

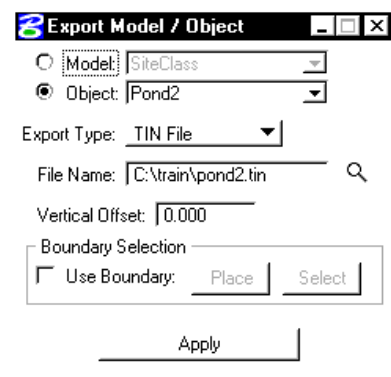
Step 1. Select **Project > Export > Model/Object** from the Site Modeler menu bar.



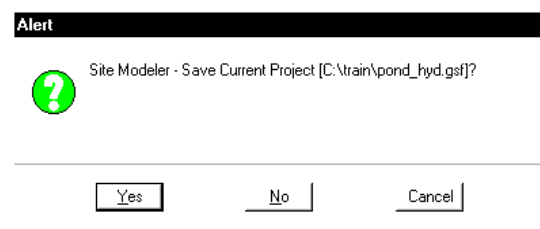
Select **Object** and choose **The Pond (name)** you want to create a tin for,

Note: If you select model instead of object you will get all of the existing ground for the model in the tin. This is not recommended because when loaded in the Trimble instrument you will not be able to tell if you are on the pond or not, besides creating a unnecessary large file.

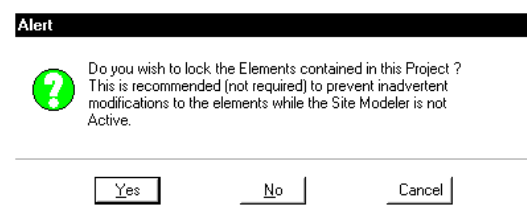
Then for Export Type Select **Tin File**. Select the **File Name**. Then select **Apply**.



Step 2. Close the Site Modeler by selecting **Project > Exit** An Alert dialog comes up to see if you want to save the Current Project. Select **Yes**.



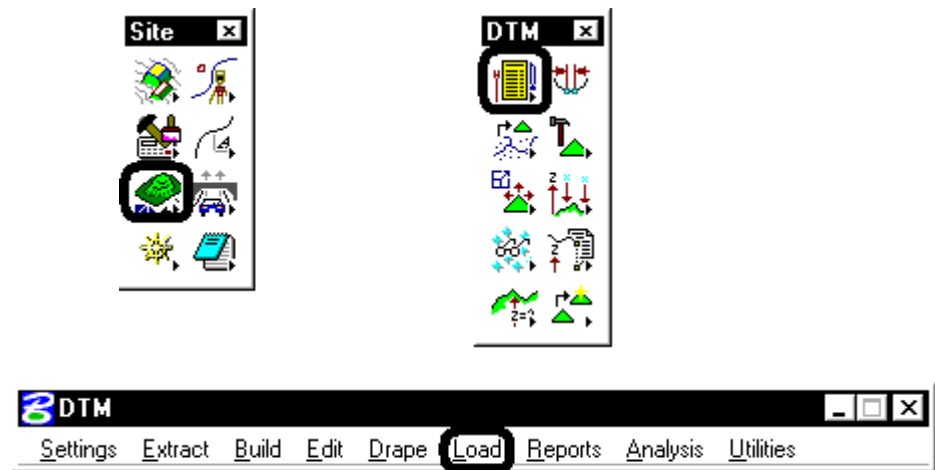
Step 3. An Alert dialog comes up to see if you want to lock the Elements contained in this project. Select **Yes**.



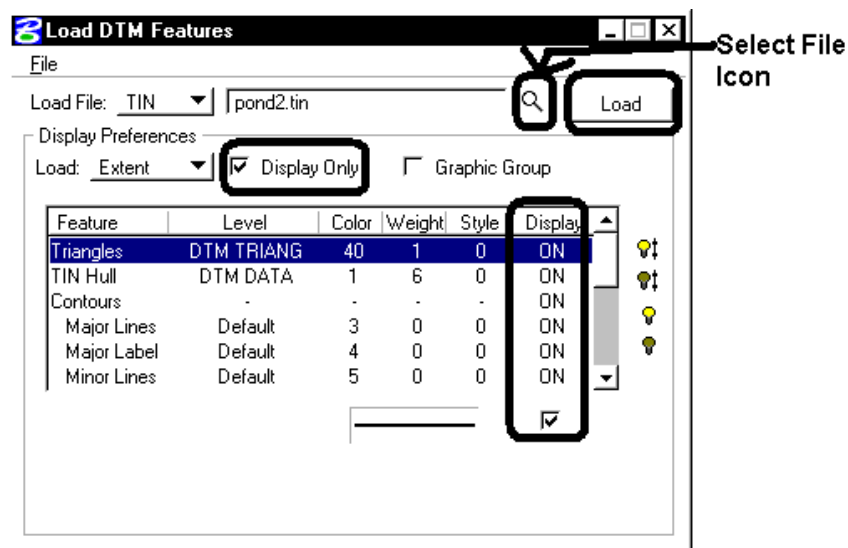
1.3 Creating ttm (Trimble file to load in instrument)

General Notes: The ttm file is used in Trimble Equipment to give you a cut/fill display and to give you X, Y, and Z locations of your Tin.

Step 1. While still in the **dgn** (MicroStation design file). Open your **DTM tools** from the site pallet. Select the **DTM Menu** from the DTM pallet. Select **Load > DTM Features**

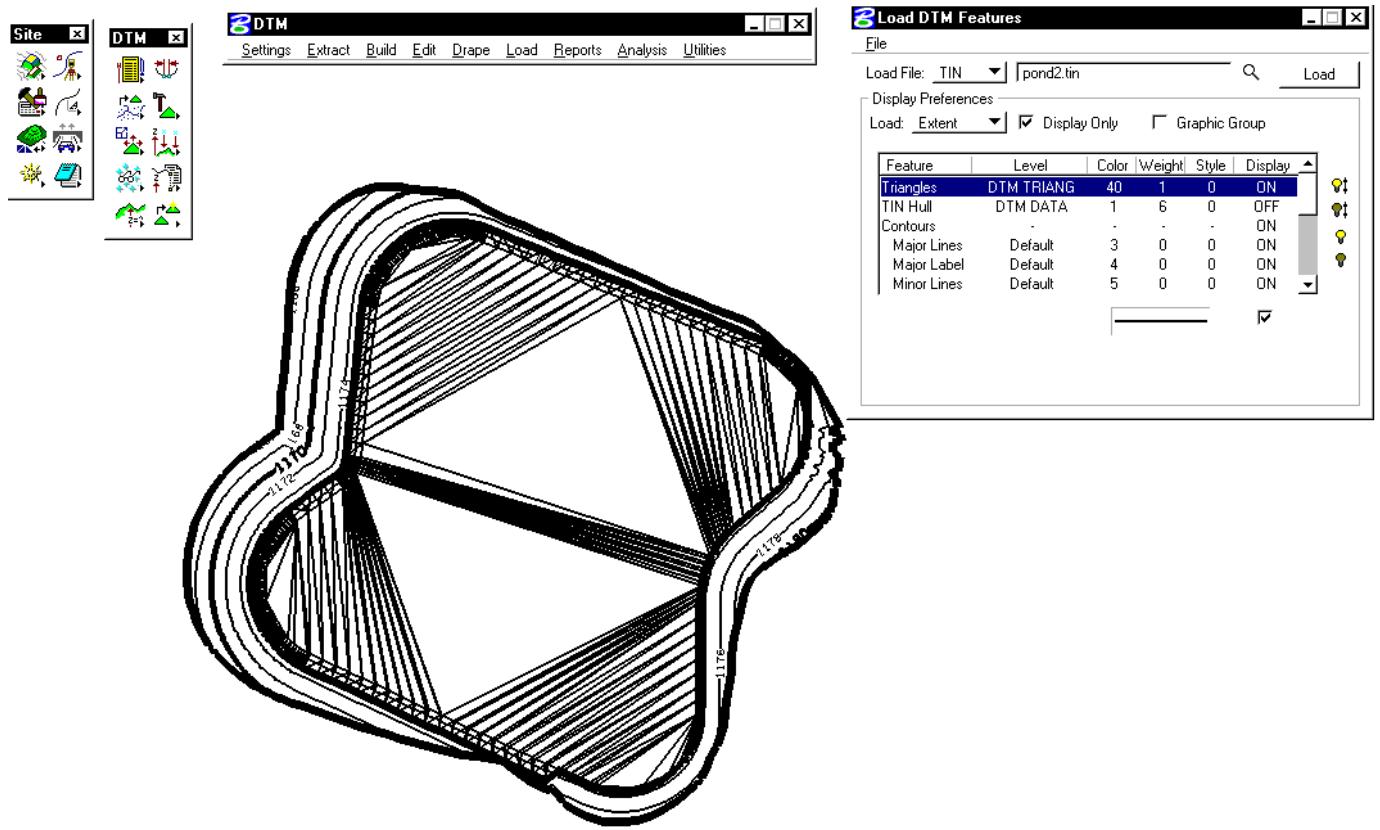


Step 2. Select the Tin file (created on page 1-2 step 1). Turn "ON" the Display for the Triangles and contours Make sure the **Display Only** is checked. Select **Load**.

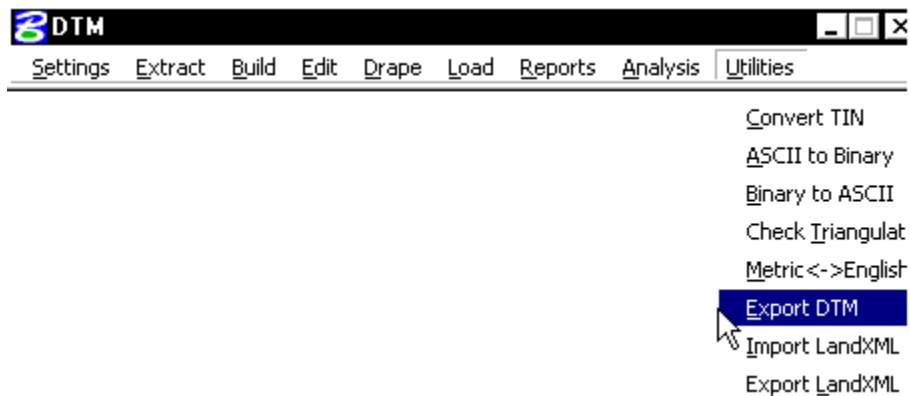


Note: This is to verify the tin file triangles in MicroStation

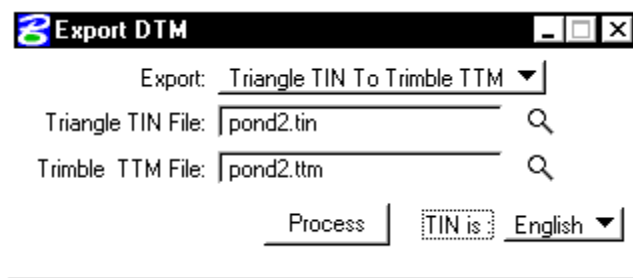
Step 3. This is what a pond should look like.



Step 4. Now open the **Utilities > Export DTM** from the GEOPAK DTM Dialog.



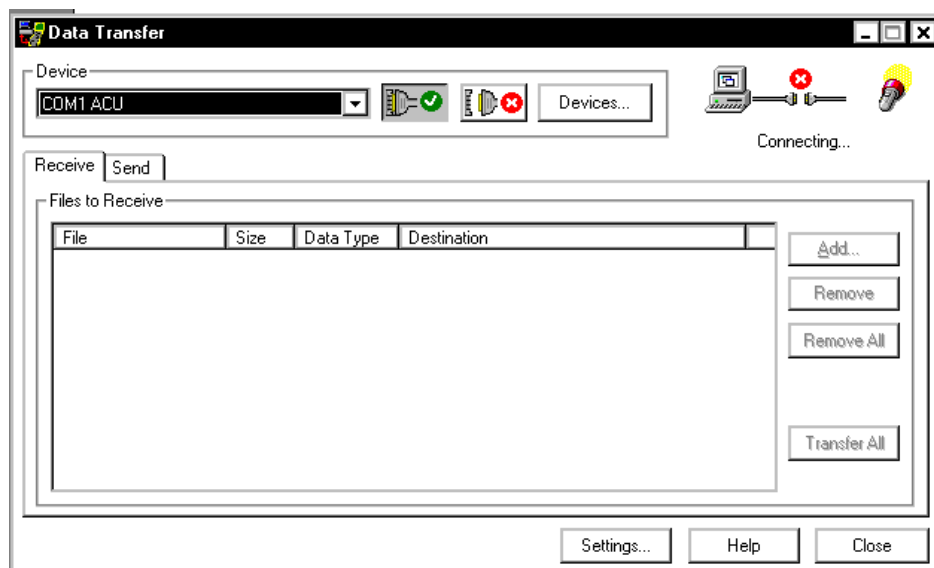
Step 7. For Export you need to select **Triangle TIN to Trimble TTM**. Then select the type of tin (English/Metric). Select the tin file to convert and then select a name for the ttm file. Then select **Process**. Now you have a Trimble formatted file.



Note: That there is also the ability of Exporting a tin to LandXML.

1.4 Utilizing TTM in Trimble

Step 1. If importing the DTM file from the Trimble Data Transfer Utility (.ttm file has already been created), you can use the Trimble Data Transfer Utility. Open the utility by the desktop shortcut, or Start, Programs, Trimble Data Transfer to start. If you do not have a controller device for the TSCe/ACU/TCU in your Device list, you must create one by clicking on the Devices Icon. Click New, to create the device, and then pick Survey Controller, the TSCe/ACU/TCU on Active Sync, Next, and Finish. This will create the new device in your Device list. Pick that device and Data Transfer will try and connect. Make sure your TSCe/ACU/TCU is on. This will connect the TSCe/ACU/TCU to Data Transfer. Now on the PC, select the Send tab and hit Add. Now under the files of type, select DTM Files .ttm. Browse the PC for your file and add it to the list. Now select Transfer All to transfer to the TSCe/ACU/TCU.



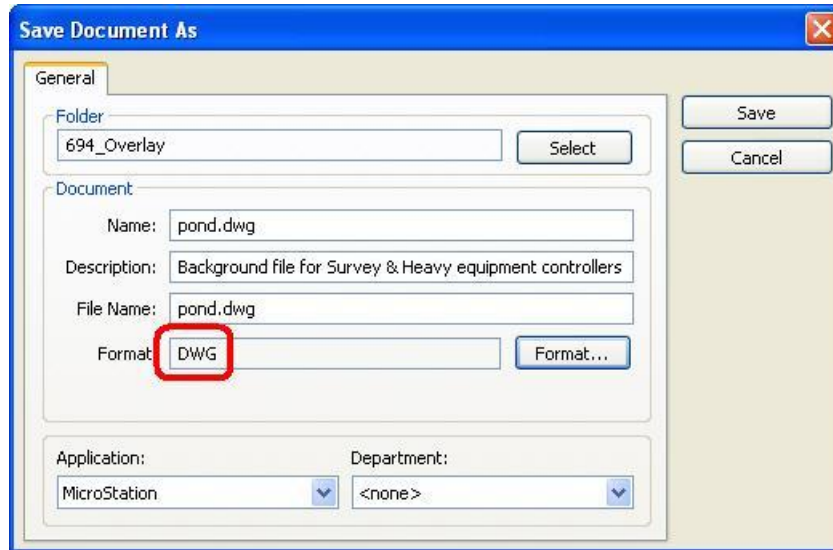
Step 2. After the file has been uploaded, you can find the DTM file under Files, Windows Explorer. To stake the DTM you must be in a survey and select Survey, Stakeout, and DTM. This will allow you to pick your DTM file for stakeout. If you want to access the DTM when staking points or a road file. You must hit the Options softkey, when in the stakeout screen of the TSCe/ACU/TCU and select to Stakeout to a DTM=Yes, and select the file you want to make active. This will then give you readout on the right hand side of the TSCe/ACU/TCU controller stakeout screen called Cut/Fill to DTM with a value

1.5 Creating and Utilizing Background Map Files

General Notes: The background file is used to reference field personal to a alignment, breaklines, tin hulls, etc. These are required so you can tell where you are in your controller display in relationship to alignment, breakline, tin hull, etc. The ttm file only gives you X, Y, Z and a cut/fill readout and when outside the tie down of your pond you will only get a ? on the readout for cut/fill. Also with the breaklines it makes it easy to follow the breaks for staking and checking.

Step 1. Create a .DWG file (Background Map). This file is exported from **MicroStation > File > Export > DWG** Note: What you see on you drawing in Microstation is what will be exported to your .dxf file. **This file has to be project coordinate correct – English or Metric.**

Note: DWG is preferred over DXF due to it's size being considerably smaller.



Step 2. You can use the Trimble Data Transfer Utility. Open the utility by the desktop shortcut, or Start, Programs, Trimble Data Transfer to start. Select the Send tab and hit Add. Now under the files of type, select DTM Files .tmm. Browse the PC for your file and add it to the list. Now select Transfer All to transfer to the TSCe/ACU/TCU.

After the file has been uploaded, you can find the background DWG file under Files, Properties of Current Job. Select "Background files:" A list of available .dwg files will appear. Select the background that you want by highlighting that file. It will place a check box in front of the file name designating that the background is active. Accept the properties and now when you view the Map in the TSCe/ACU/TCU, you will see the background file as it appeared in Microstation.