



Vectorworks Landmark Tutorial Manual

by Jonathan Pickup



Table of Contents

Introduction	iii
Project 1 Quick Domestic Project	1
Project 2 Domestic Project	11
Step 1 Layer and Model Setup	11
Document Setup	11
Step 2 Layer Setup	17
Step 3 Importing a Scanned Image	19
Step 4 Placing and Editing Plants	20
Step 5 Hardscape	36
Step 6 Drawings and Annotation	43
Project 3 Commercial Project	47
Step 1 Layer and Model Setup	47
Step 2 Importing DXF/DWG File (Architect's Plan)	52
Step 3 Placing the Landscape Areas	57
Project 4 Full Domestic Project	69
Step 1 Layer and Model Setup	69
Step 2 Layer Setup	75
Step 3 Property Line	78
Step 4 Creating the Site Model	82
Step 5 Creating the Walls	94
Step 6 Creating The Roof	98
Step 7 Doors and Windows	101
Step 8 Floors	108
Step 9 Link House to Site	110
Step 10 Placing Plants	116
Step 11 Creating the Deck	124
Step 12 Stairs	130
Step 13 Site Modifiers	135
Step 14 Hardscape	145
Step 15 Adding 3D to Your Plants	150
Step 16 Drawings and Annotation	155
Finally	180

Project 1 Quick Domestic Project

This project is designed to show you how quick it can be to draw plants and hard landscaping once you have all the information you need.

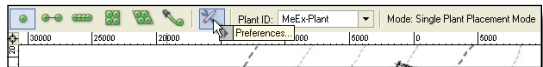
- Open the file **Project_1.sta** from the exercise folder. This file is a Vectorworks template file. It has a scanned image of our house plan and the plants already imported into it. All we have to do is to add the plants and hardscape to the plan.



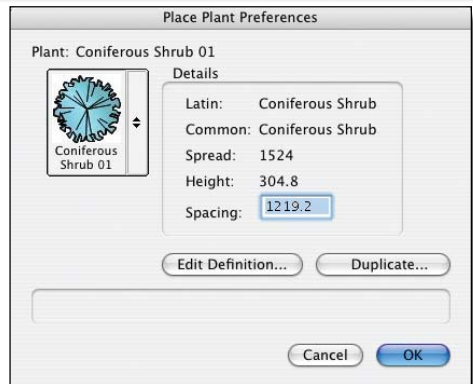
- Go to the **Site Planning** Tool set.
- Choose the **Place Plant** tool.



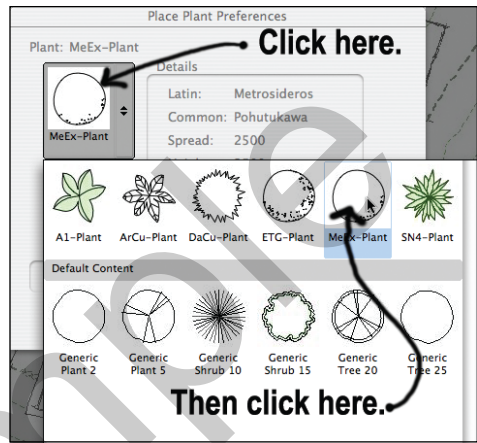
- Go to the **Tool Bar**.
- Click on the **Plant Tool Preferences...** button.



- This opens the dialog box where we choose the plant we want to place. You can set the size of the plant, the type of plant, spacing and height.



- Click on the plant, and a series of plants will appear. Choose **MeEx**.
- Click on the **OK** Button.



- Go to the **Tool Bar**.
- Choose the first mode. This allows you to place one tree at a time.



- Click once to place a tree.



- Your tree is placed where you clicked.



- Place four plants along the top of the site.



- Go to the **Tool Bar**.
- Click on the **Plant** pop-up menu.
- Choose a different plant.



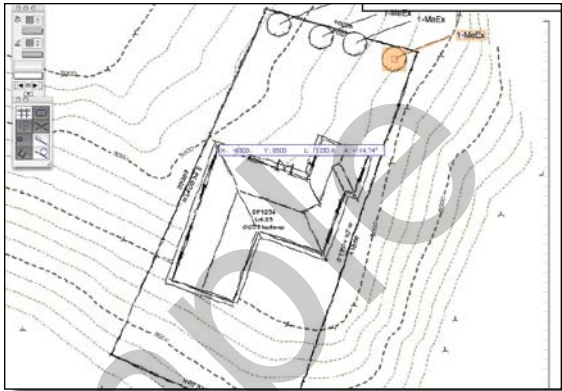
- Go to the **Tool Bar**.
- Click on the mode for placing plants in a triangular array.



- Click once at the corner of the first plant that we have already placed.



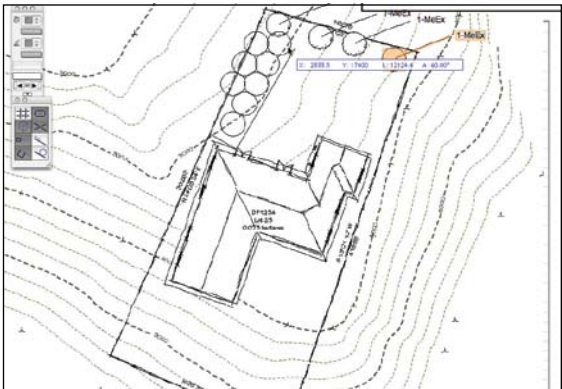
- Come down the boundary.
- Click once.



- Move across the front of the house.
- Click once.



- Move up the Site.
- Double click.



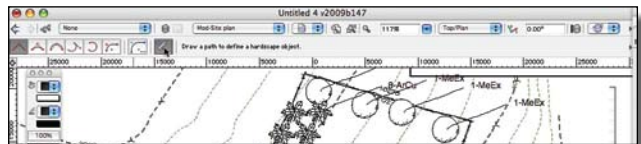
- Vectorworks draws all the trees.



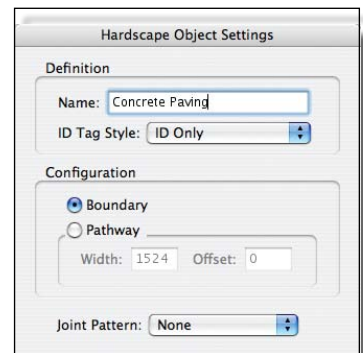
- Go to the Site Planning Tool set.
- Choose the **Hardscape** tool.



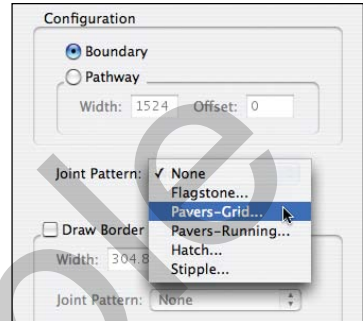
- Go to the **Tool Bar**.
- Click on the **Preferences...** button.



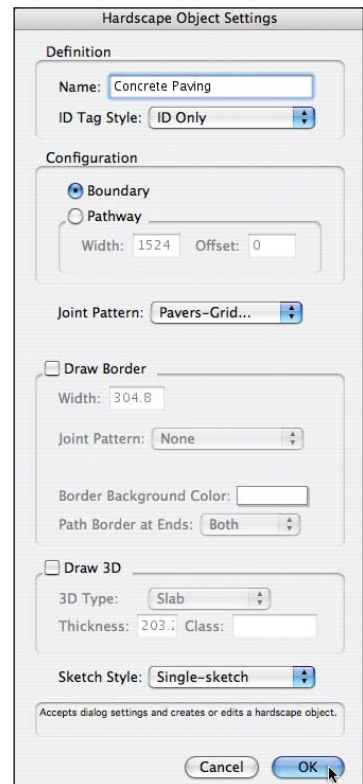
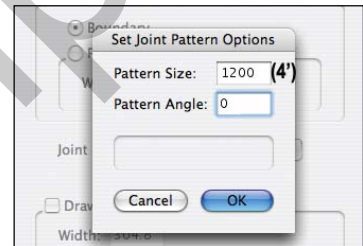
- Name the hardscape.



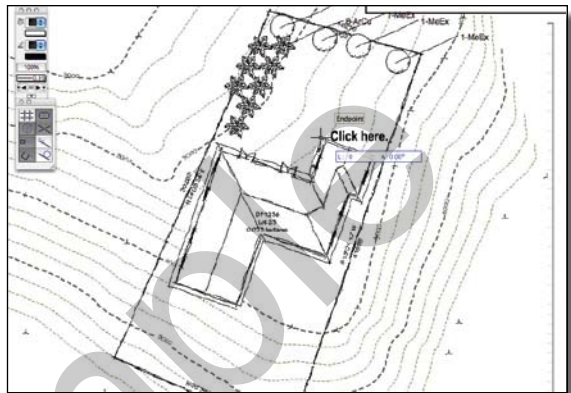
- Click on the **Joint Pattern** pop-up menu.
- Choose **Pavers-Grid...**



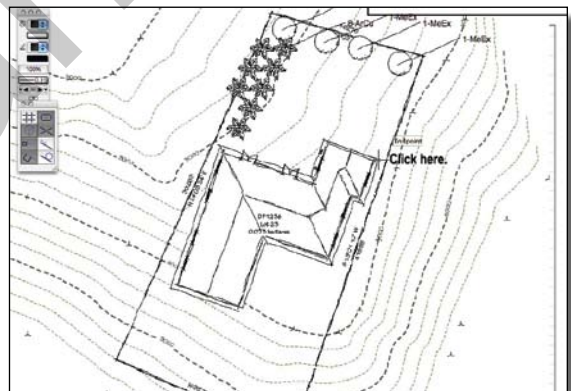
- Type in the size of the tiles.
- Type in the angle for the tile grid.
- Click on the **OK** button to leave the Set Joint Pattern Options dialog..
- Click on the **OK** button to leave the Hardscape Object Settings dialog.



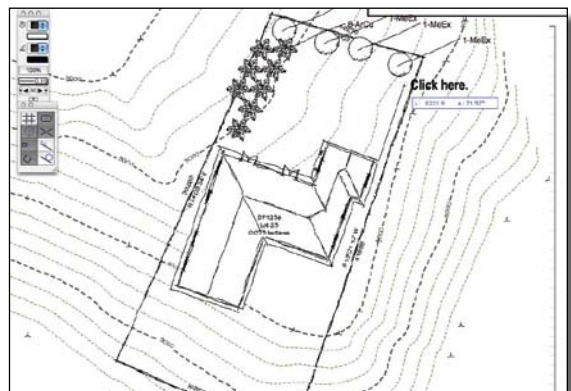
- Click once to start the Hardscape.



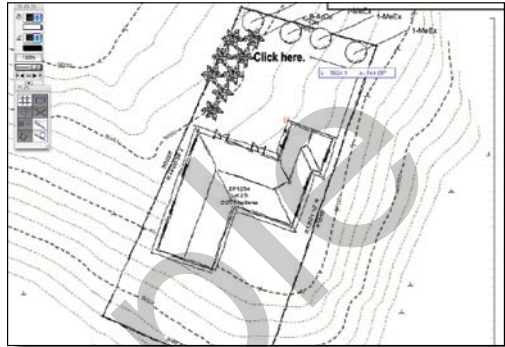
- Move along the face of the building.
- Click once.



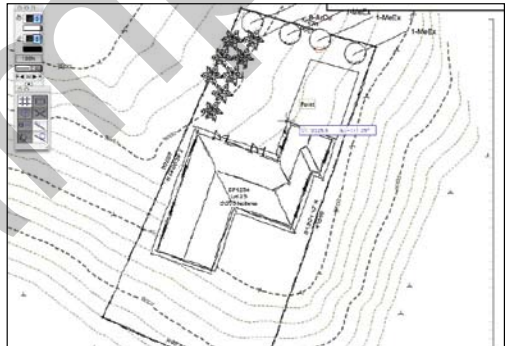
- Move up the site.
- Click once.



- Move across the site.
- Click once.



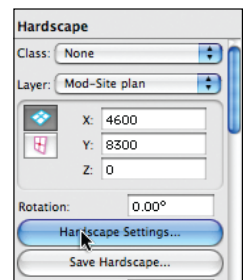
- Move back to where you started. You will get a screen hint that says **Point**.
- Click once.



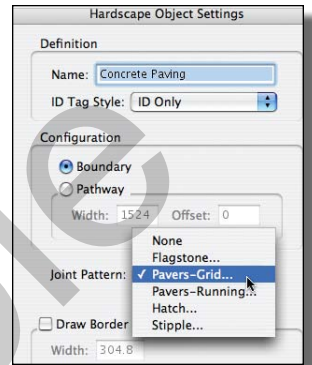
- Vectorworks makes the Hardscape. You can edit the hardscape (or any object) with the Object Info Palette.



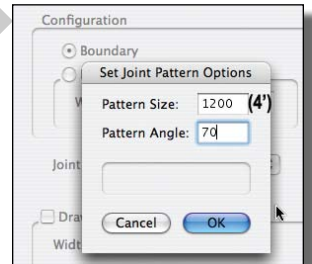
- Go to the Object Info Palette.
- Click on the **Hardscape Settings...**



- Click on the **Joint Pattern** pop-up menu.
- Choose **Pavers-Grid...**



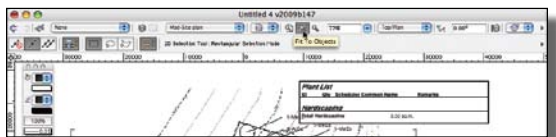
- Change the angle to 70°. You may have noticed that as we drew the hardscape a floating display told you the angle you were drawing.
- Click on the **OK** button to leave the Set Joint Pattern Options dialog..
- Click on the **OK** button to leave the Hardscape Object Settings dialog and apply the changes.



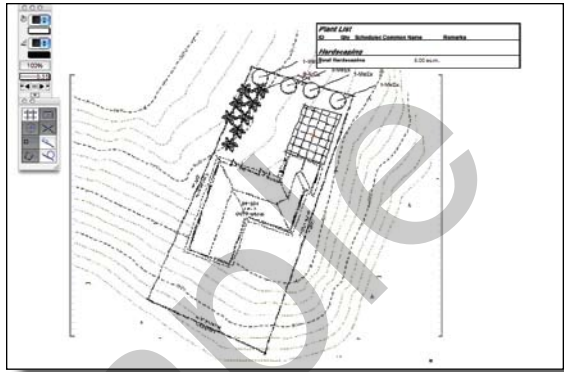
- Now you see the new settings applied to the hardscape.
- Go to the Basic tool palette.
- Double click on the 2D selection tool. This will de-select everything.



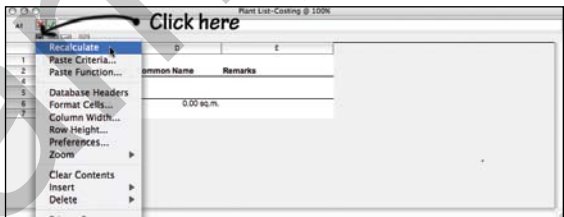
- Go to the View Bar.
- Click on the **Fit to Objects** button.



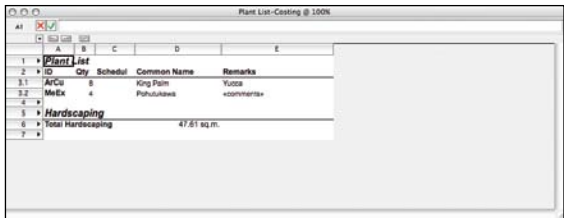
- You should see a worksheet at the top right of the screen.
- Double click on it.



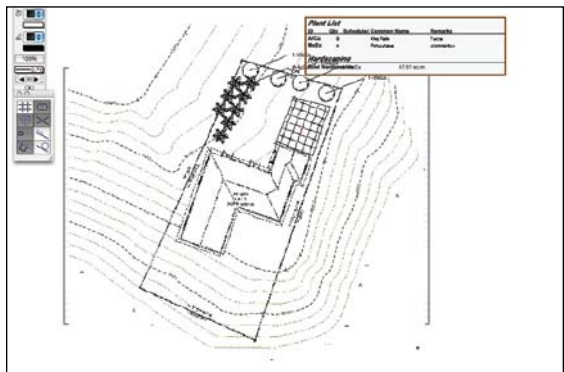
- This opens the worksheet in a floating window.
- Click on the down-turned arrow at the top left of the worksheet window.
- Choose **Recalculate...** from the worksheet menu.



- The worksheet counts up the trees, and hardscape.



- Close the worksheet by clicking on the close button (the red dot on a Macintosh, the red cross on Windows) on the top of the worksheet window.
- The worksheet shows on the drawing.



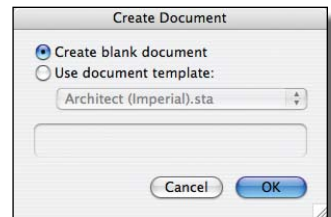
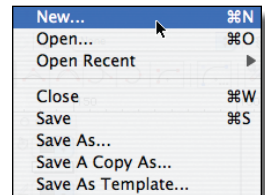
Project 2 Domestic Project

Step 1 Layer and Model Setup

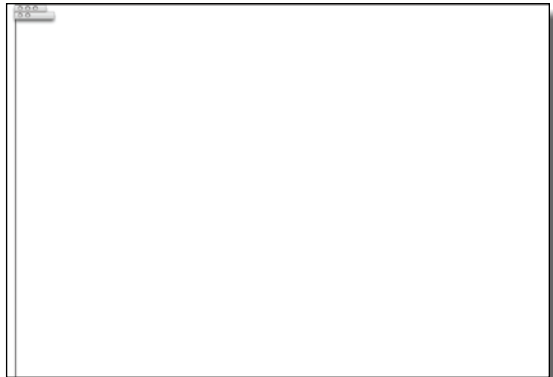
Document Setup

We will set up the file from the beginning, from a blank document. Vectorworks has setting up commands to make it easier to set up the file. When you have set up the file it can become a template file that you can use to start every new job, saving you a lot of time in setting up...

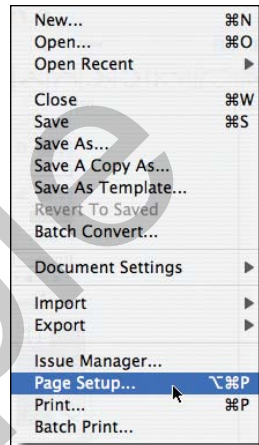
- Go to the Menu Bar.
- Choose **File > New...**
- This opens a dialog box for you to choose **Blank Document**



- A blank file opens with a layer scale of 1:1 and a letter size page.
- We should set up our page first...



- Go to the **Menu Bar**.
- Choose **File > Page Setup...**
- This opens a dialog box for you to set up the page size.



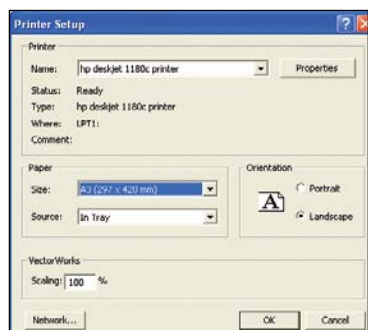
- This dialog box allows you to set up the printer that you are using.
- Click on the **Printer Setup...** button.



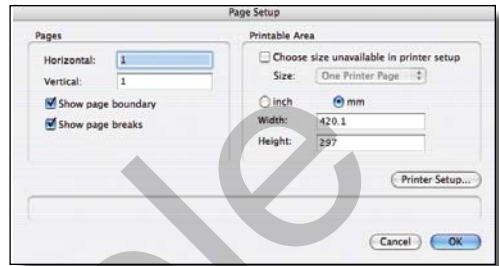
- This dialog box will vary depending on your printer.
- On a Macintosh the dialog box will look similar to this picture. Set the printer, page size and page orientation.
- Click on the **OK** button.



- On a Windows machine the dialog box will look similar to this picture. Set the printer, page size and page orientation.
- Click on the **OK** button.



- This takes you back to the Page Setup dialog box.
- Our drawings are going to be set up using Viewports, so the page boundary won't be meaningful on our design layers.
- Turn off **Show Page Boundary**.
- Turn off **Show Page Breaks**.
- Click on the **OK** button.

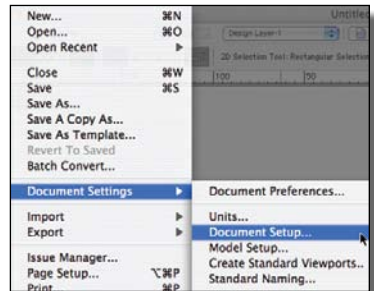


- Vectorworks shows the new drawing area.

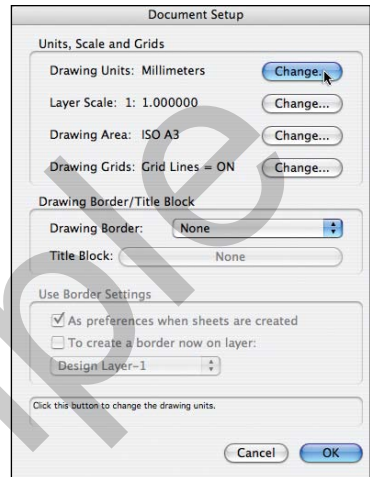


- Go to the **Menu Bar**.
- Choose **File > Document Settings > Document Setup...**

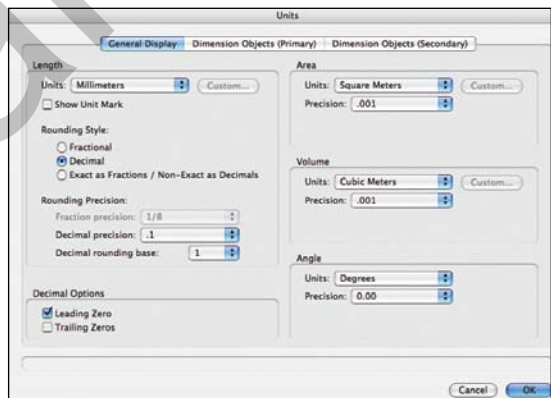
Document Setup is a quick way to set up the drawing when you are starting a new project.



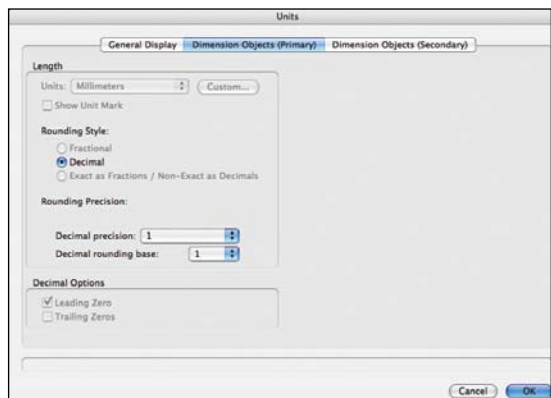
- On this dialog box we get the opportunity to check the set up of the project as a whole, the units, layer scale, drawing area, grid setting and the title block size.
- Click on the **Drawing Units: Change...** button. This will open the Units dialog box for us to set up the drawing units, primary dimensioning, secondary dimensioning and area and volume units.



- Set your **General Display** units to the settings that you want.



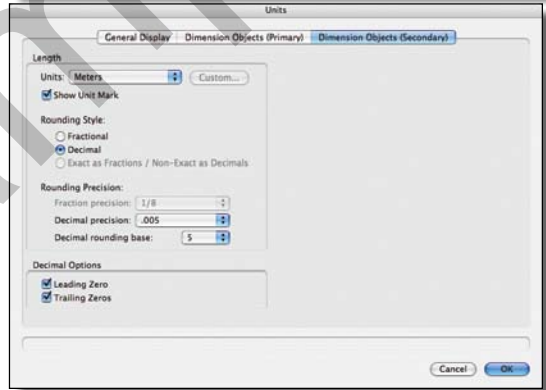
- Set the **Dimension Objects (Primary)** to the settings that you want.



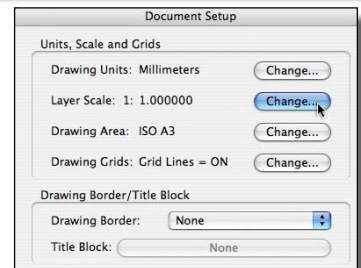
- The settings might start in feet and inches.



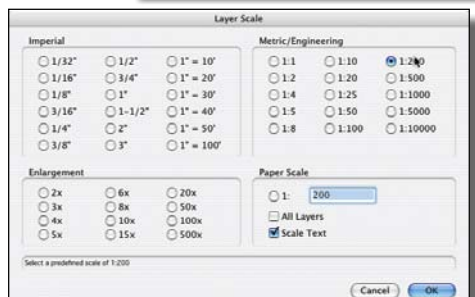
- Set the **Dimension Objects (Secondary)** to the settings that you want.
- Click on the **OK** button.



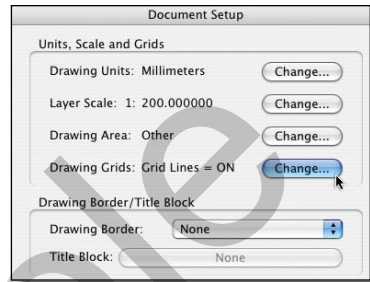
- Click on the **Layer Scale: Change...** button. This will open the Layer Scale dialog box for us to set the scale of the current layer.



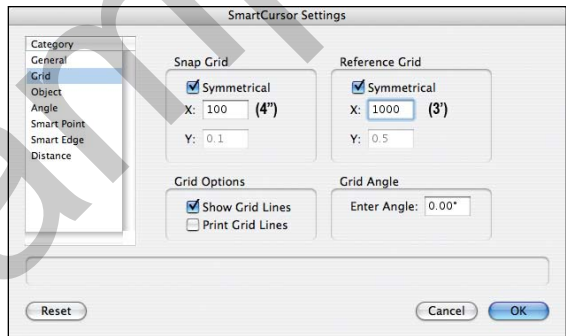
- Set your Layer Scale to **1:200**.
- Click on the **OK** button.



- Click on the **Drawing Grids: Change...** button. This will open the Set Grid dialog box for us to set the snap and reference grids for our file.



- Choose **Grid** on the left hand side.
- For metric drawings set the snap grid to **100mm** and the reference grid to **1000mm**.
- For imperial drawings set the snap grid to **4"** and the reference grid to **3'**.
- Click on the **OK** button.



The reference grid may not appear on the screen due to the density of the grid at a particular scale and page size.

The Document Setup dialog box now shows you your settings.

- Click on the **OK** button.



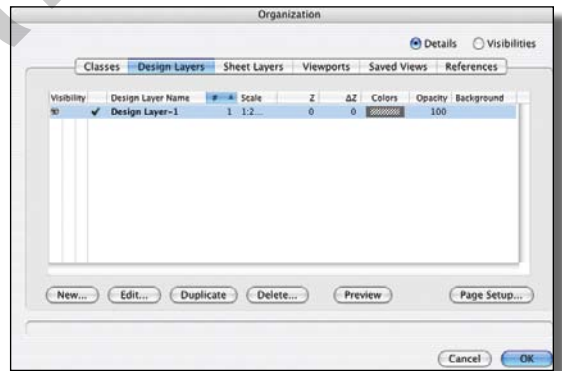
Step 2 Layer Setup

Layers allow you to break up the file into manageable chunks. If you are not familiar with layers, please refer to the Essential Tutorial Manual, which has a series of exercises to explain layers.

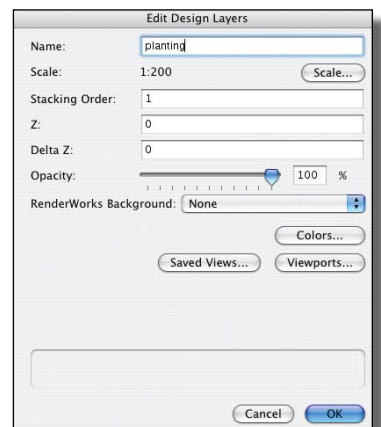
- Go to the **View Bar**.
- Click on the Layers button to open the Organization dialog box.



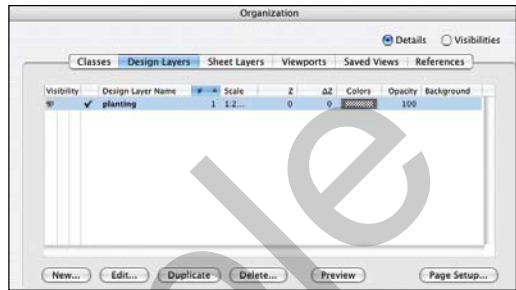
- We need to add some layers for our site plan, planting, and boundary line, and we need to add a layer for the concept drawing.
- Click on the **Edit** button to edit the name of the existing layer. We want to change the name to something more meaningful.



- Change the name of this layer to **planting**.
- Click on the **OK** button.



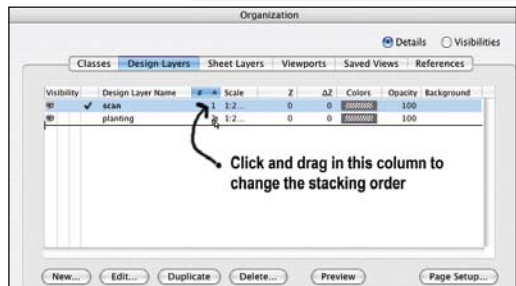
- You can see the layer name has been edited.
- To add a layer, click on the **New...** button.



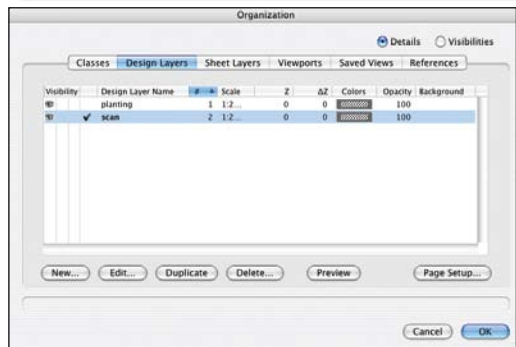
- Name the layer **scan** (use this layer to hold the scanned drawing).
- Click on the **OK** button.



- We need the scanned image at the bottom of the list.
- Click and drag the scan layer by the # column to the bottom of the list.



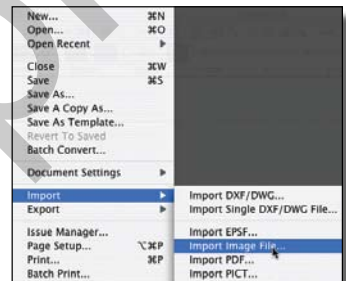
- The scan layer should be at the bottom of the stacking order now. This means that the plants and hard landscaping will sit on top of the scanned image.
- Click on the **OK** button.
- If you haven't saved your file, save it now.



Step 3 Importing a Scanned Image

In this project we will import a scanned image. Then we will use the scanned image to add the plants and hard landscaping. This is very similar to our first project, but we will go into more detail for this project.

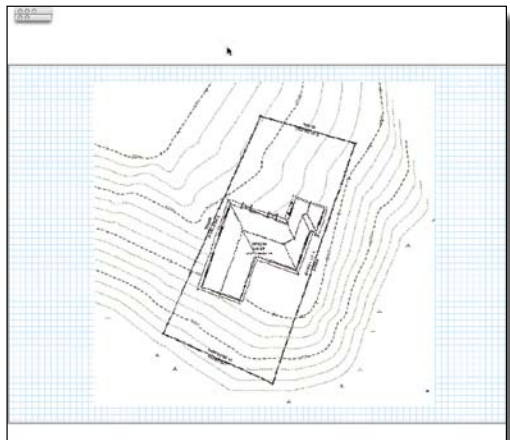
- Go to the **Menu Bar**.
- Choose **File > Import > Import Image File...**
- Import the **Project 2 scan.jpg** file from the exercise folder.
- Set your Compression options to **JPEG**.
- Click on the **OK** button.



- The scanned image is about 1:200 scale so we don't need to do anything else to this image.



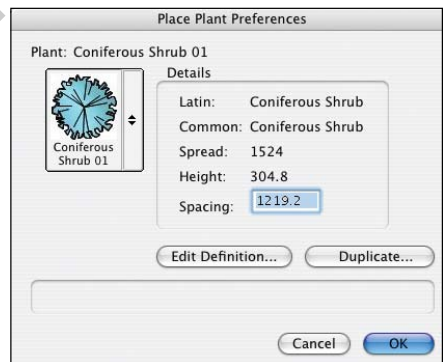
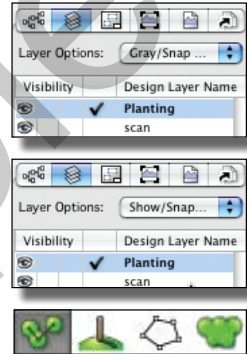
- Drag the site scan so that it's in the middle of the drawing. If the scanned image is in the center of the drawing, leave it there.



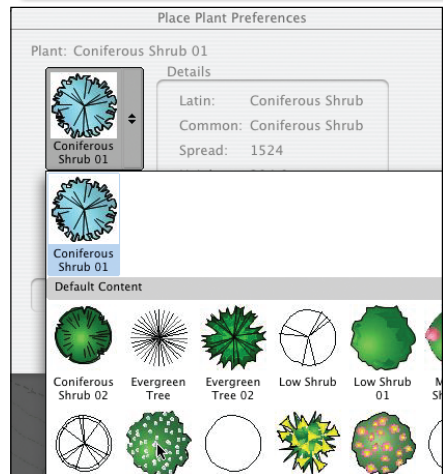
Step 4 Placing and Editing Plants

We will use this to place plants on the drawing.

- Change Layers to **planting** (ie. make **planting** the active layer). You can use the Layer button on the View Bar, or you can use the Navigation palette.
- Change the Layer Options to **Show/Snap Others**.
- Go to the **Site Planning** Tool set.
- Choose the **Place Plant** tool.
- The first time you use this tool, a dialog box opens for you to choose the plant.

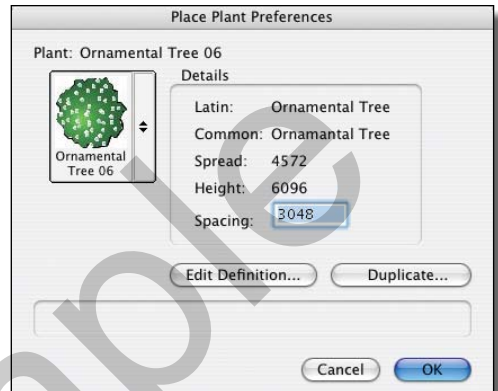


- Click on the plant image, and a series of plants will appear.
- Choose one of the plants.

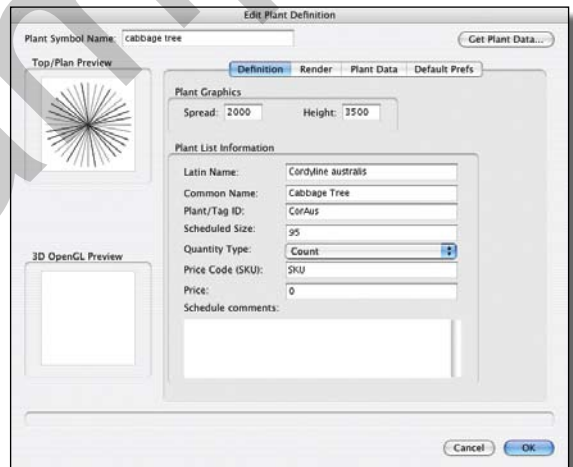


You might not see the same plants as I have in this picture. The plants shown are saved in a file in the Libraries folder. You can edit this file to speed up placing plants.

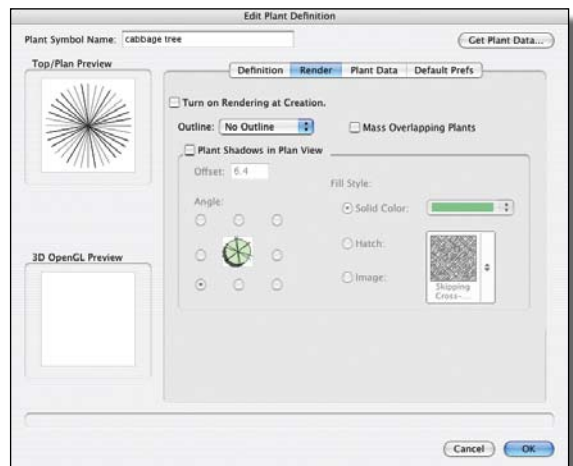
- On this dialog box you can change the plant spacing. We want to change the plant definition.
- Click on the **Edit Definition...** button.



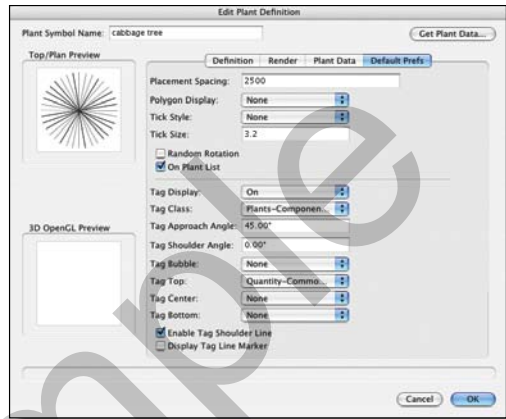
- Click on the **Definition** tab.
- Change the Spread, Height and Spacing.
- Type in the botanical name, the common name and anything else you want to record about your plant.



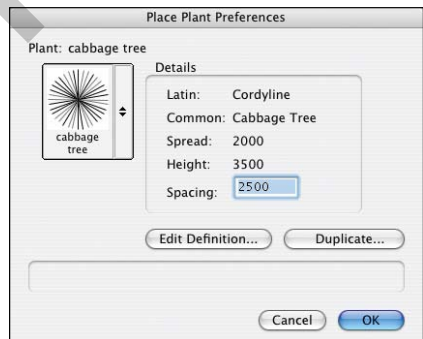
- Click on the **Render** tab.
- This tab allows you to define the rendering options. These can dramatically improve the appearance of your planting.



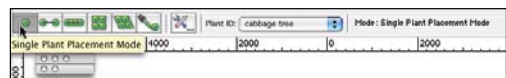
- Click on the **Default Prefs** tab.
- This tab allows you to set up the spacing, tag display, and so on. We will come back to this dialog box when we want to edit our plants again.
- Click on the **OK** button to close the dialog box.



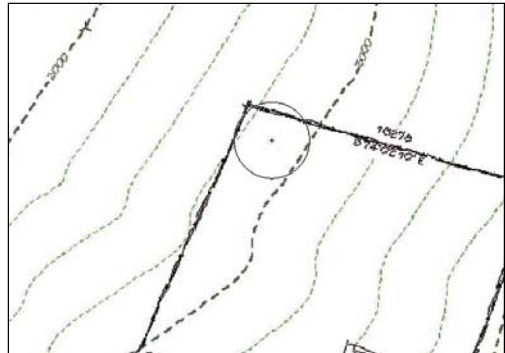
- You are back at the Plant Preferences. This dialog box displays the changes you made. You can change the plant spacing if you want.
- Click on the **OK** button.



- Go to the **Tool Bar**.
- Choose the first mode. This places one plant at a time.



- Click once at the top of the site where you want a plant.



- Vectorworks places the center of your plant where you clicked.
- If you turned on the tag display you will be able to see the plant with the tag attached.

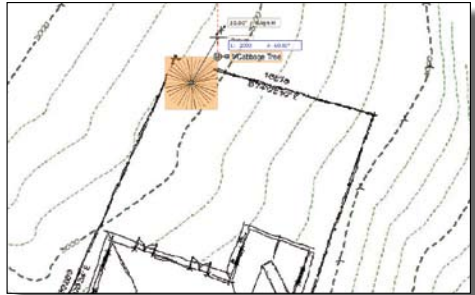


If you do not like the plant tag where it is, you can change it.

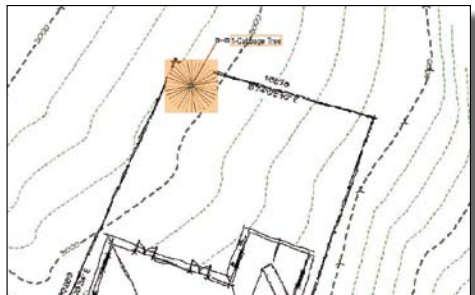
- Go to the **Basic** Tool set.
- Select the **2D Selection** tool.
- Move to the blue handle at the corner of the plant tag. Notice that your cursor changes to a double-headed arrow.
- Click once.



- Move your cursor outside the site.



- Click once to place the tag.
- If you want to change the text size of the tag, use the Format Text command from the text menu (just make sure the plant object is selected first).



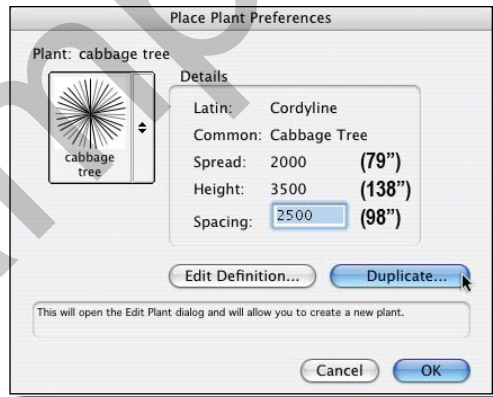
- Go to the Site Planning Tool set.
- Choose the **Place Plant** tool.



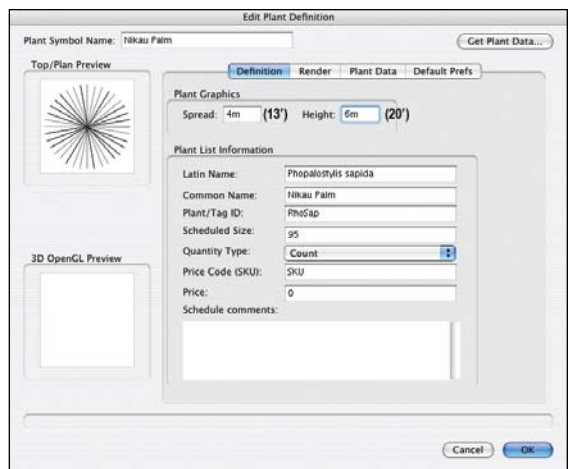
- Go the Tool bar.
- Click on the **Preferences...** button.



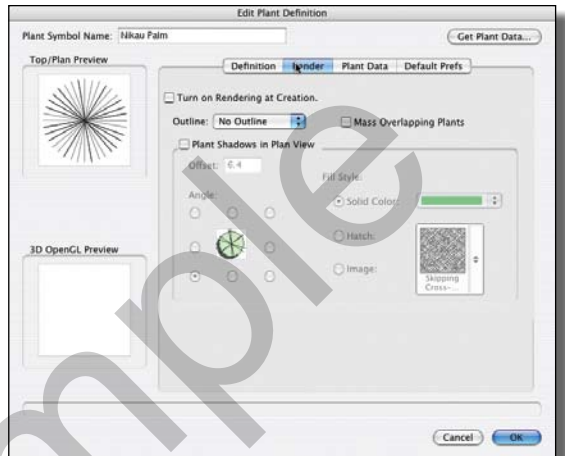
- Click on the **Duplicate...** button.



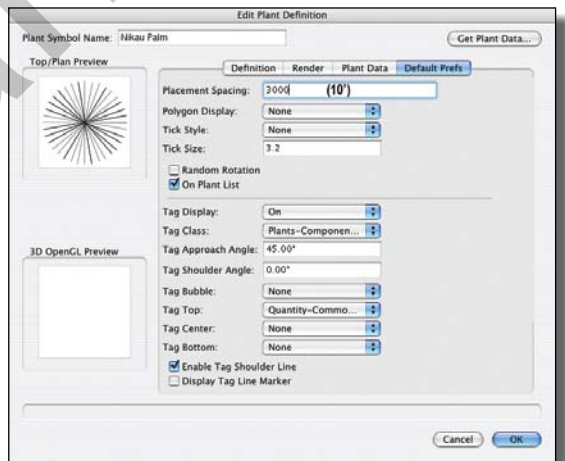
- Click on the **Definition** tab.
- Type in the botanical name, the common name and anything else you want to record about your plant.



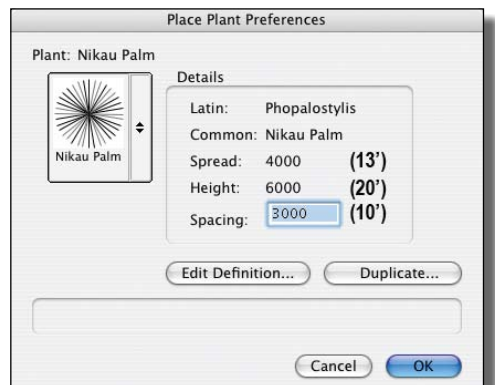
- Click on the **Render** tab.
- This tab allows you to define the rendering options. These can dramatically improve the appearance of your planting.



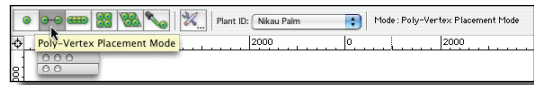
- Click on the **Default Prefs** tab.
- This tab allows you to set up the spacing, tag display, and so on. We will come back to this dialog box when we want to edit our plants again.
- Click on the **OK** button.



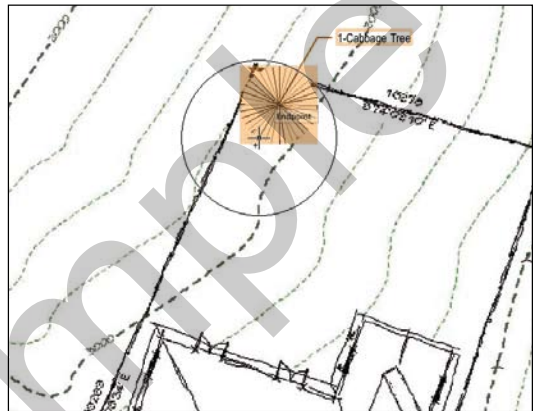
- You are back at the Plant Preferences. This dialog box displays the changes you made. You can change the plant spacing if you want.
- Click on the **OK** button.



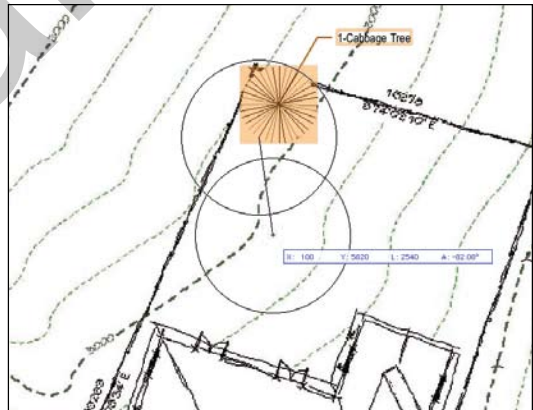
- Go to the Tool Bar.
- Click on the second mode.
This mode places the plants in a group. It places one plant each time you click.



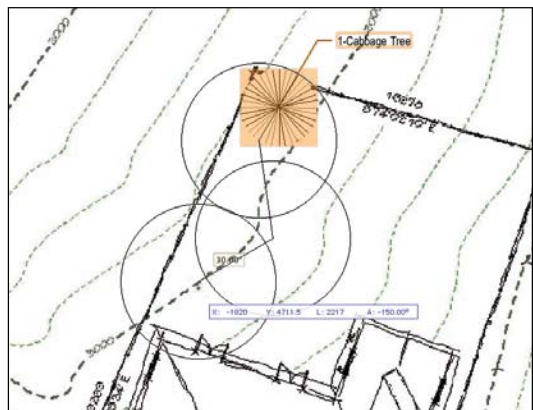
- Click once for the first plant.



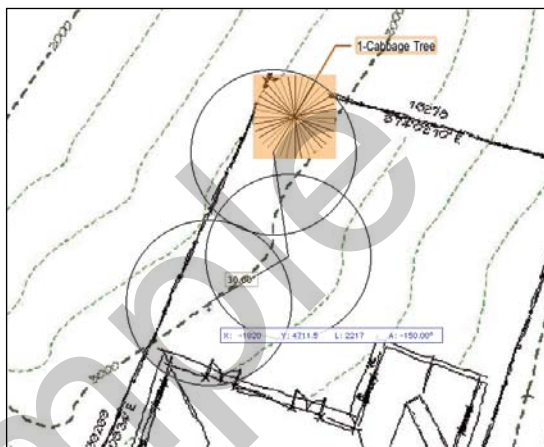
- Click once for the second plant.



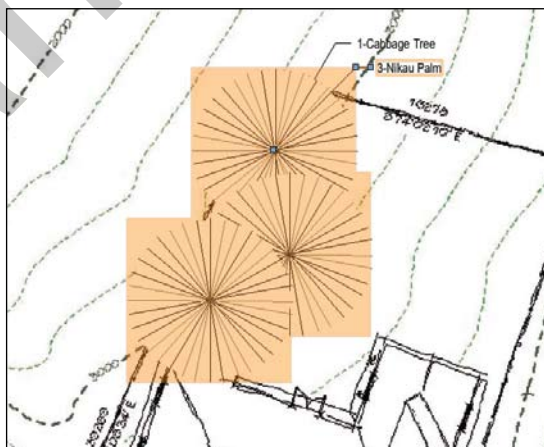
- Double click for the last plant. If you don't double click, Vectorworks will keep placing plants.



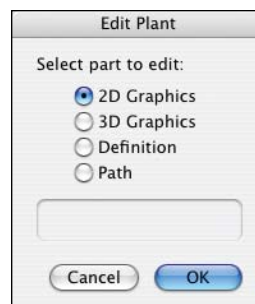
There are the plants. When we look at the plants, we can see that they do not look like palm trees. We should change the 2D shape to look more like a palm.



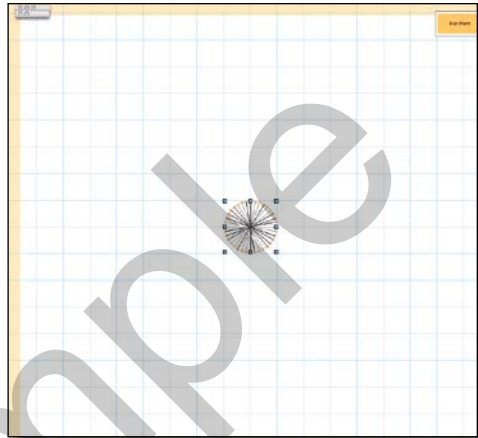
- Go to the **Basic** Tool set.
- Select the **2D Selection** tool.
- Double click on the nikau palm. Double click anywhere on the plants.



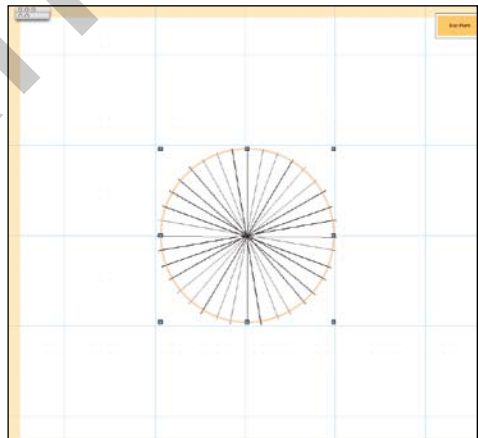
- This dialog box allows you to edit your plants.
- Choose **2D Graphics**.
- Click on the **OK** button.



- You can see the 2D part of the plant.

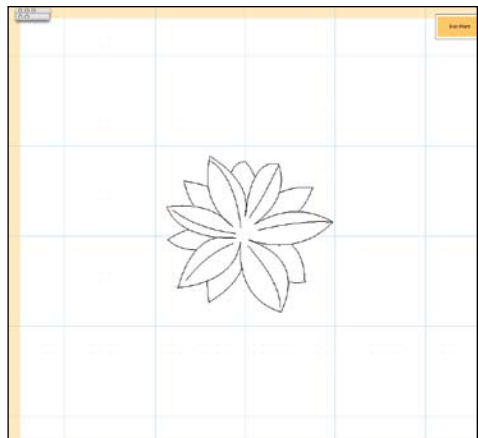


- Zoom in to make it easier to draw.

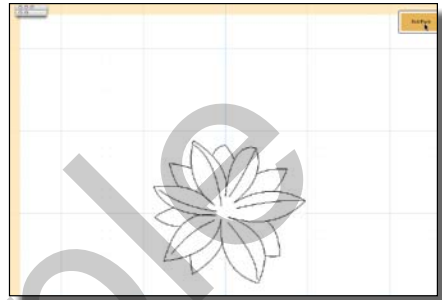


- Draw the new plant shape you want.

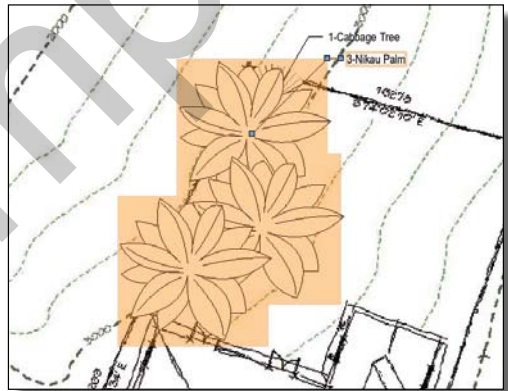
Use polygons, lines and shapes. It is better to use closed shapes like polygons. That way you can add color or images to the shape. You can copy plant shapes from other files and paste them here.



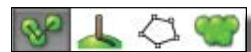
- Click on the **Exit Plant** button at the top right.



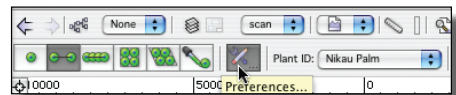
- Your plants are updated.



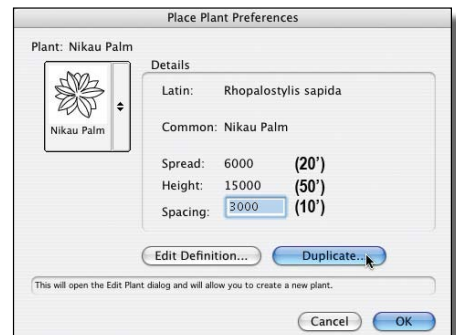
- Go to the **Site Planning** Tool set.
- Choose the **Place Plant** tool.



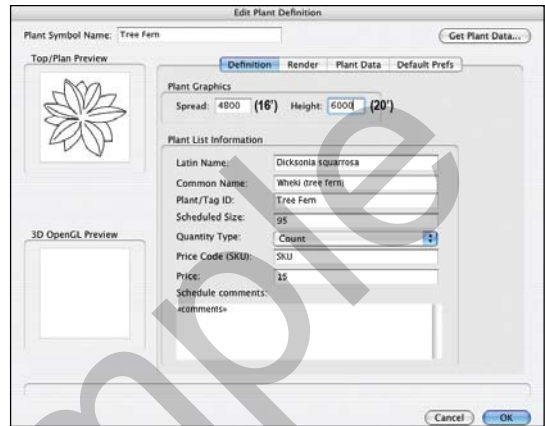
- Go the **Tool Bar**.
- Click on the **Preferences...** button.



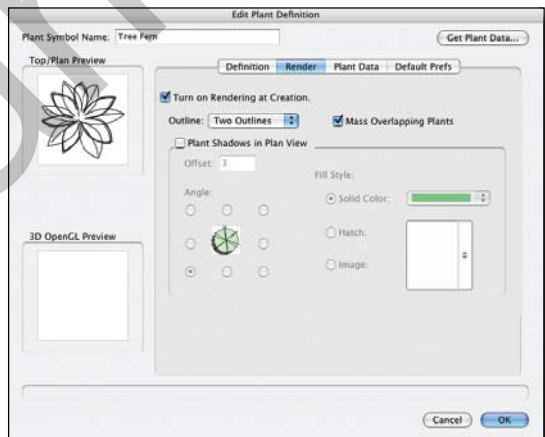
- Click on the **Duplicate...** button.



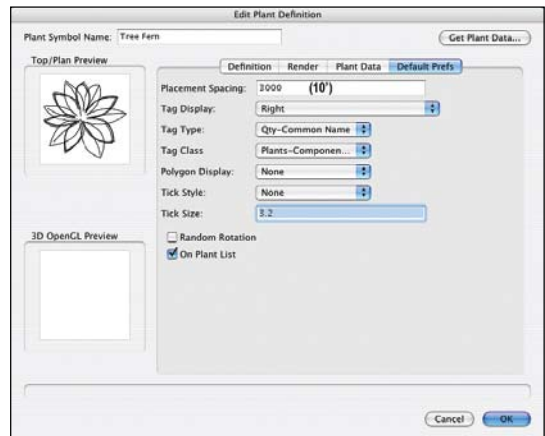
- Click on the **Definition** tab.
- Type in the botanical name, the common name and any thing else you want to record about your plant.



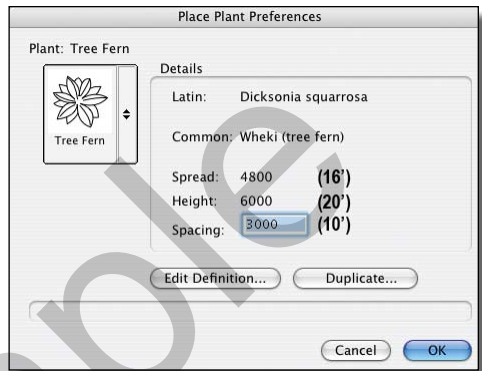
- Click on the **Render** tab.
- This tab allows you to define the rendering options. These can dramatically improve the appearance of your planting.



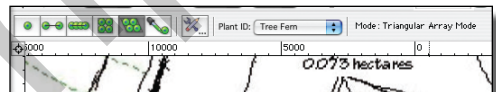
- Click on the **Default Prefs** tab.
- This tab allows you to set up the spacing, tag display, and so on. We will come back to this dialog box when we want to edit our plants again.
- Click on the **OK** button.



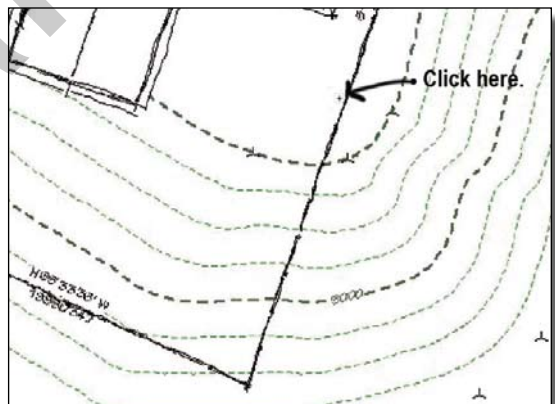
- You are back at the Plant Preferences. This dialog box displays the changes you made. You can change the plant spacing if you want.
- Click on the **OK** button.



- Go to the **Tool Bar**.
- Click on the fourth mode. This mode places plants in a group. It places as many plants as possible in an area you define.



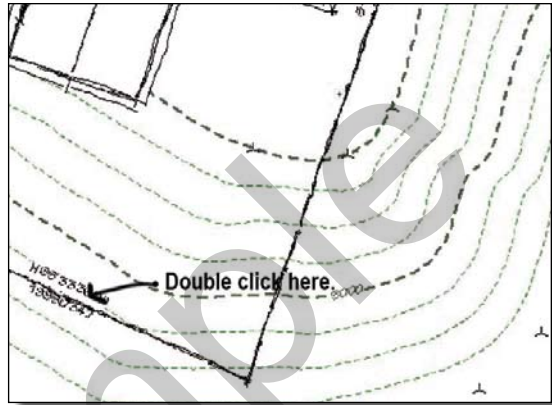
- Click once near the boundary in the back yard.



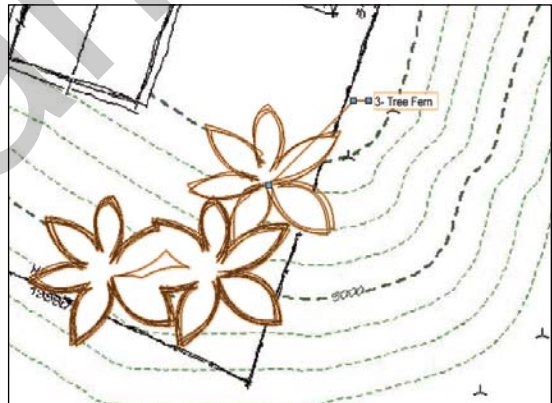
- Click once near the corner of the boundary.



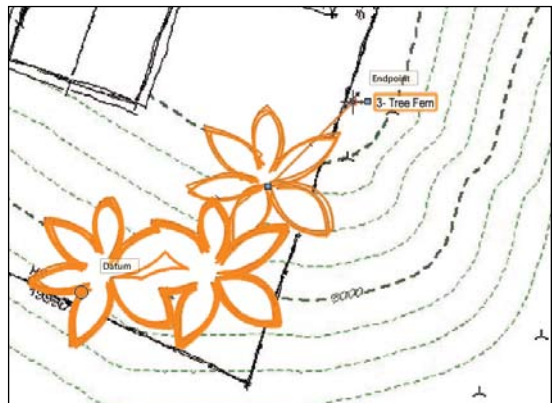
- Double click to finish.



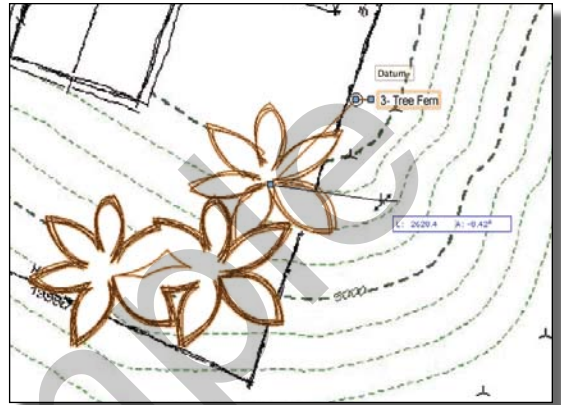
- The plants will fill in.
- If the Plant tag is not where you want it, you can move it, by using the 2D Selection tool.



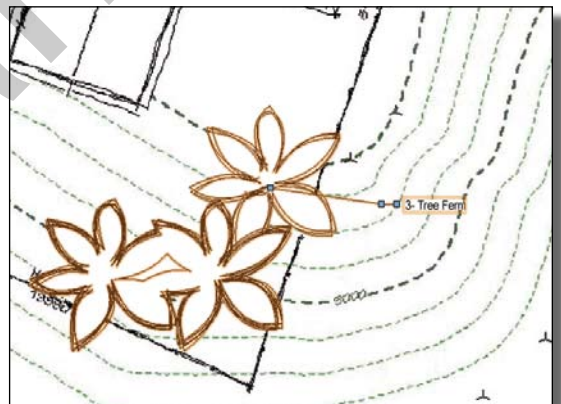
- Move your cursor to the handle that controls the plant tag position, it's the handle near the text.
- When the cursor changes to a reshape cursor, click once.



- Move the mouse to the new tag location.
- Click once.

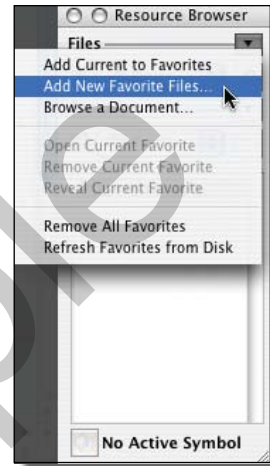


- The Plant tag is moved to the new location.

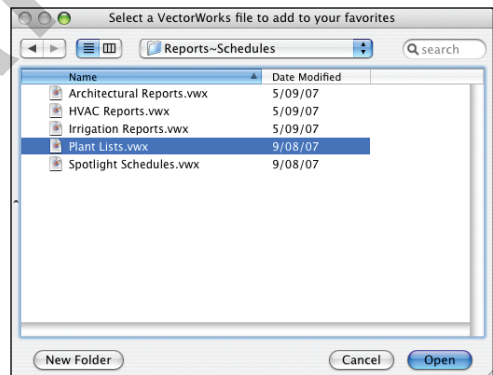


So far this is pretty good, but we can also find out how many plants there are. Vectorworks has the file we need in the library. To access this file, we need to add it to our Resource Browser. This file makes it easy to count the plants.

- Go to the Resource Browser
- Click on the Utility Menu button at the top right.
- Choose **Add New Favorite Files...**
- Find the **File Plant Lists**. It's stored in you, Vectorworks application folder.



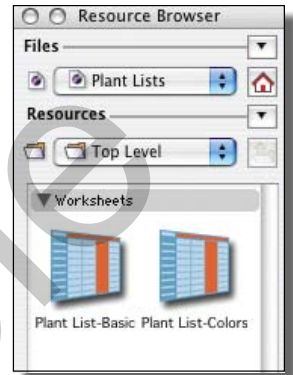
- On the Macintosh the file is stored in:
**Applications/Vectorworks 2009/
Libraries/Defaults/
Reports~Schedules/**
- On a Windows machine the file is stored in:
**Program Files\Vectorworks 2009\
Libraries\Defaults\
Reports~Schedules**



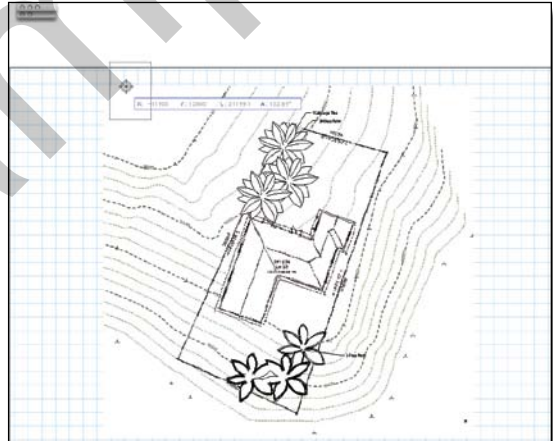
- When the file is added as a favorite, Vectorworks will always link to the file. Generally you won't have to connect to this file again.
- Click on the pop-up menu where you can see the file name of your current project.
- Choose the **Plant Lists** file.



- Click on the **Plant List-Basic** worksheet and drag it into the drawing.

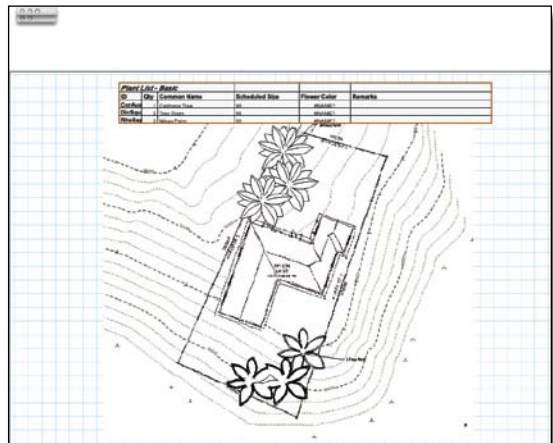


- When you release the mouse button, the worksheet is added to the file and is placed on the drawing.



- Notice that the worksheet has counted up all the plants that you have placed in the drawing.
- Use the **2D Selection Tool** to drag the worksheet to a better location.

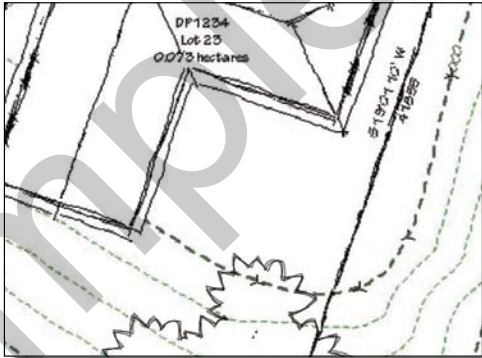
The worksheet is designed to count all your plants and collect information about the them. If you want to know more about using and editing worksheets, please refer to the Essential Tutorial Manual available from <http://www.archoncad.com> or <http://www.Vectorworks.net>.



Step 5 Hardscape

Hardscape is a special tool that makes it easy to draw areas of paving. This hardscape can be 2D only, or it can be 2D and 3D. If you make it 3D, then it can be a site modifier and can affect the site model.

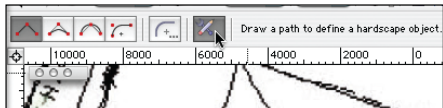
- Zoom in to the south area of the house.



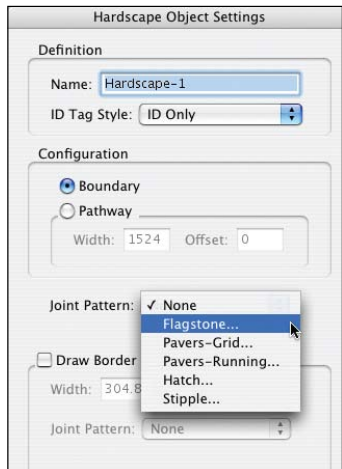
- Go to the Site Planning Tool Set.
- Choose the **Hardscape** tool. With this tool you draw a shape for the hard landscaping, and Vectorworks fills in the hardscape using the details that you enter.



- Go to the Tool Bar.
- Click on the **Hardscape** tool Preferences... (the last button on the Tool Bar).

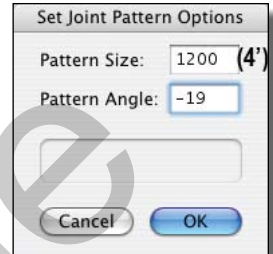


- From the **Joint Pattern** pop-up menu choose: **Flagstone...**

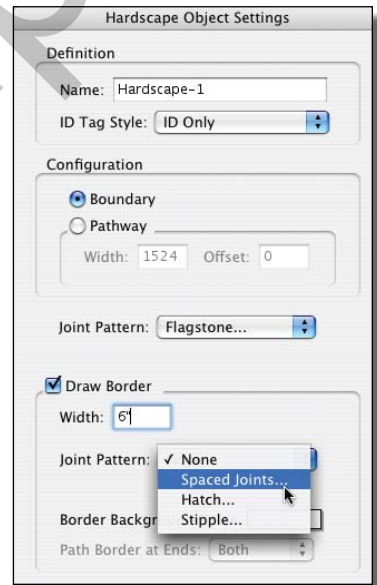


This opens a dialog box for you to set the flagstone options, such as the overall pattern size and the angle.

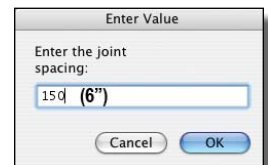
- Enter the overall size of the Flagstones, **1200mm (4')**.
- Enter the angle, **-19°**. This is the angle for the house relative to horizontal.
- Click on the **OK** button to return to the Hardscape Settings.



- Turn on the **Draw Border** option.
- Set the Width at **150mm (6")**.
- From the **Joint Pattern** pop-up menu choose: **Spaced Joints...**

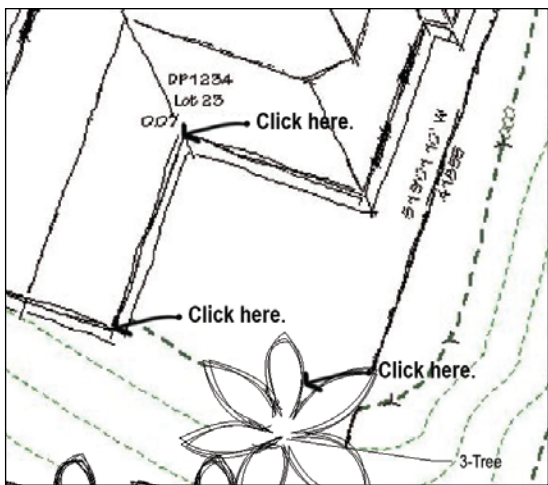


- This opens a dialog box for you to set the distance between the joints.
- Click on the **OK** button to get back to the Hardscape Settings.

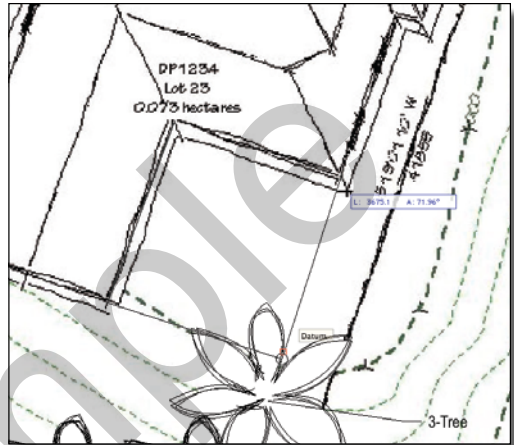


- Name the hardscape. Give the hardscape a name you would like to see as a label on the plan. For example, you could name the hardscape **Area 1**, or you could name the hardscape with the type of material you intend to use, such as **Concrete Paving**.
- Click on the **OK** button to close the Hardscape Settings.

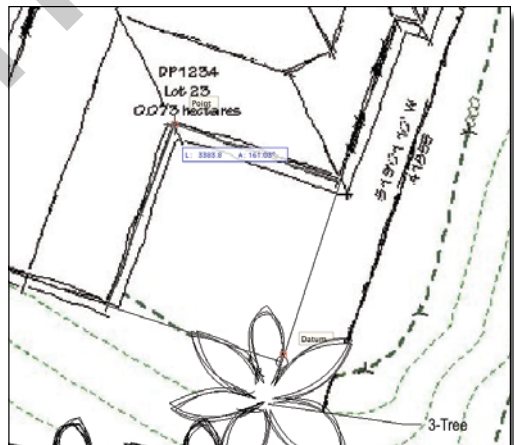
- Click once for the start of the hardscape.
- Click once for the first corner for your hard landscaping.
- Click once again for the second corner for your hard landscaping.



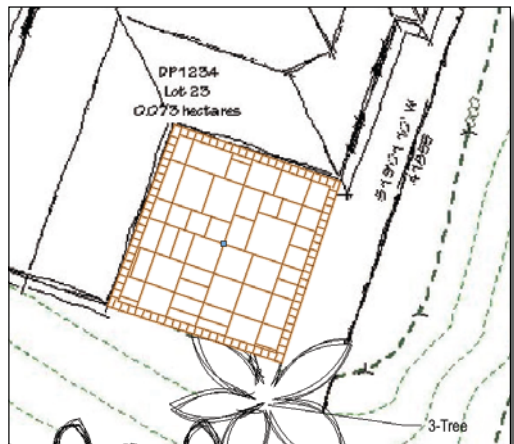
- Click once more for the third corner for your hard landscaping.



- Finally, click once more where you started the hardscape. This should complete the polygon.



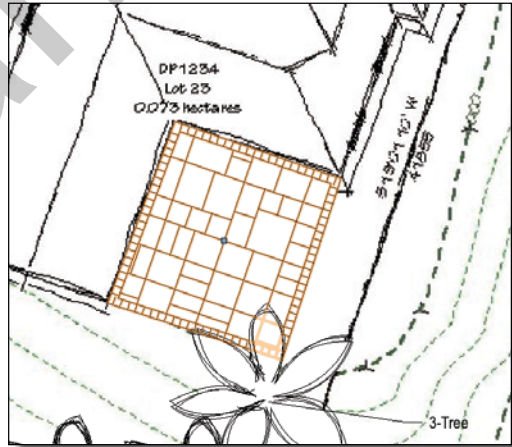
- Vectorworks fills in the hard landscaping.



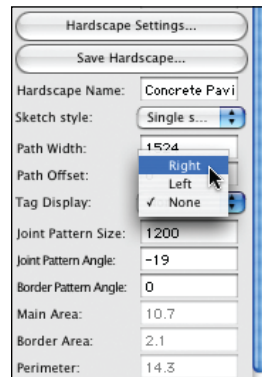
- If the hardscape obscures the planting, right mouse click (control-click on a one button mouse) on the hardscape and choose:
Send > Send to Back.



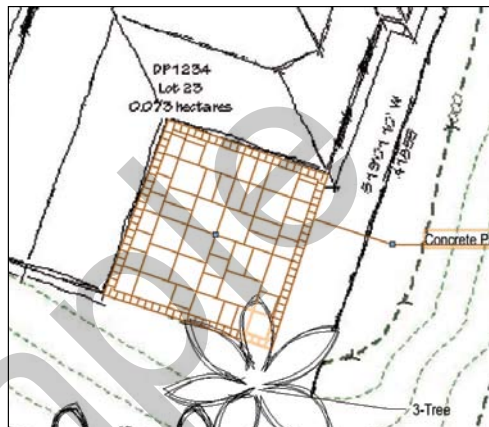
- The planting looks better with the hardscape.



- Go to the Object Info Palette.
- Turn on the tags and change the Hardscape name to something that will be more meaningful for your client.

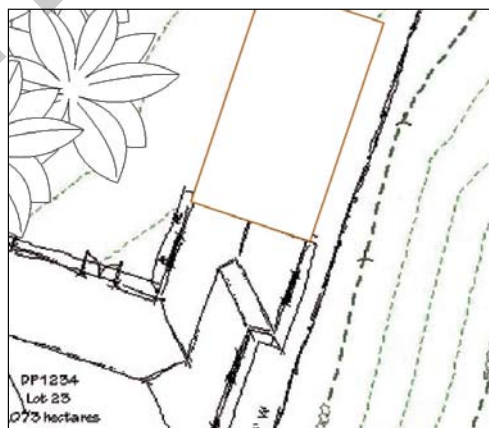


- Use the 2D Selection tool to move the Hardscape tag to a better location.

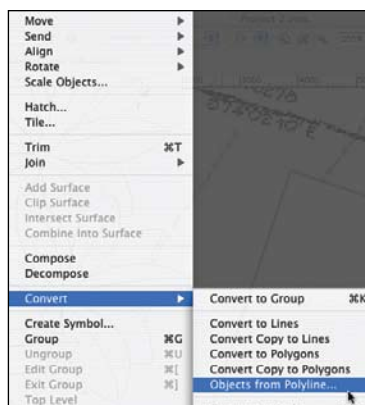


There is another way to make hardscapes. I like this way because I find it quicker and easier.

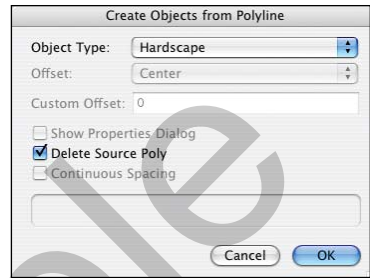
- Use the rectangle tool to draw an area. This technique will show you a quick way to make your hardscapes.



- Go to the Menu Bar.
- Choose **Modify > Convert > Objects from Polyline...**

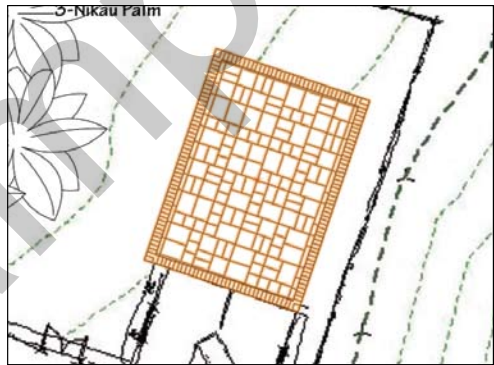


- Go to the **Object Type** pop-up menu.
- Choose **Hardscape**.
- Select the option to **Delete Source Poly**.
- Click on the **OK** button.

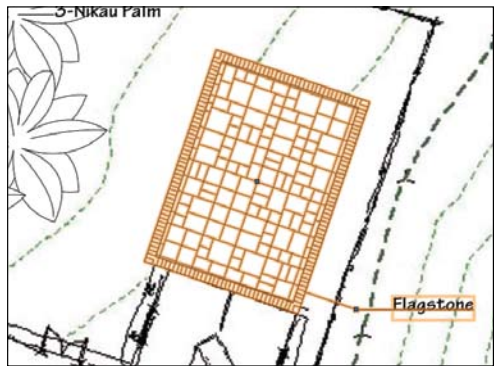


- The rectangle is converted in to a hardscape.

This is an easier and quicker way to draw hardscape areas.



- Turn on the hardscape tag.
- Change the hardscape name to something more descriptive.
- Use the 2D Selection tool to move the Hardscape tag to a better location.

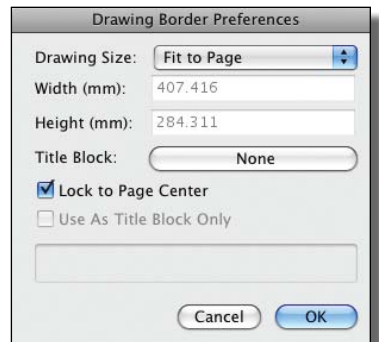
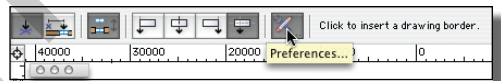


Step 6 Drawings and Annotation

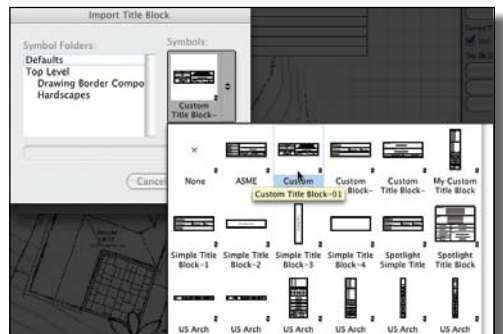
Drawings without annotation are incomplete. This section shows you how to add a title block.

Standard Title Blocks (Drawing Border)

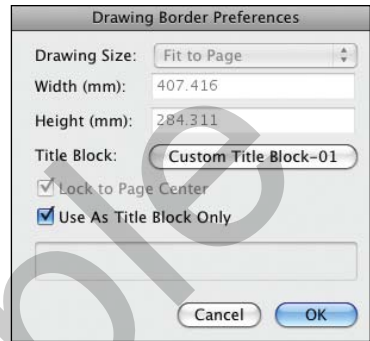
- Go to the **Dims/Notes** Tool Set.
- Click once on the **Drawing Border** tool.
- Go to the **Tool Bar**.
- Click on the **Preferences...** button.
- Click on the Title Block button.



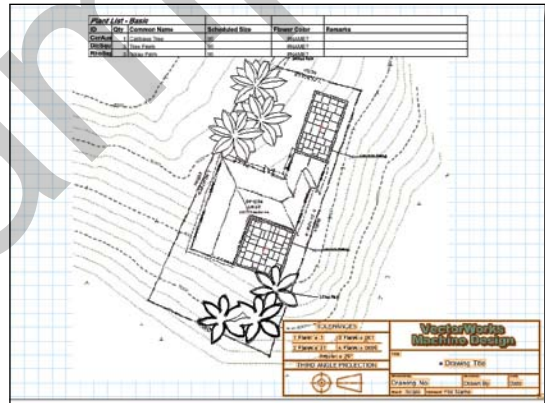
- Choose the title block:
Custom Title Block-01
- You can change your title block later to a different one by clicking on the **Title Block...** button on the Object Info Palette again.



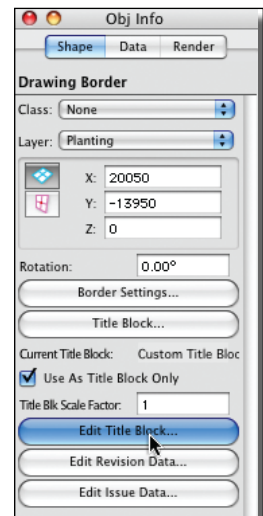
- Click on the option for **Use As Title Block Only**.
This means that you don't have to turn off the border.
- On the Object Info Palette click on the **Title Block...** button. This allows you to choose a sample title block to use as the basis of your title block.



- Move to the bottom right of the drawing area.
- Double click to place the title block.



- With the Object Info Palette you can adjust the scale of the title block, the contents of the title block and many other settings.
- Click on the **Edit Title Block...** button on the Object Info Palette.



- Use this dialog box to fill in the details for the Title block.

Edit Title Block

General Tolerance

Drawing Title: Drawing Title

Drawing Number: Drawing No.

Drawn By: Drawn By

Date: Date

Scale: Scale

Sheet No: Sht

CAD Filename: File Name

Cancel OK

- Fill in the drawing name, drawing number and so on.
- Click on the **OK** button.

Edit Title Block

General Tolerance

Drawing Title: Smith House Planting Plan

Drawing Number: 100

Drawn By: me

Date: today

Scale: 1:200

Sheet No: 100

CAD Filename: smithhouse.vwx

Cancel OK

- Notice that the information is added to the drawing border.

