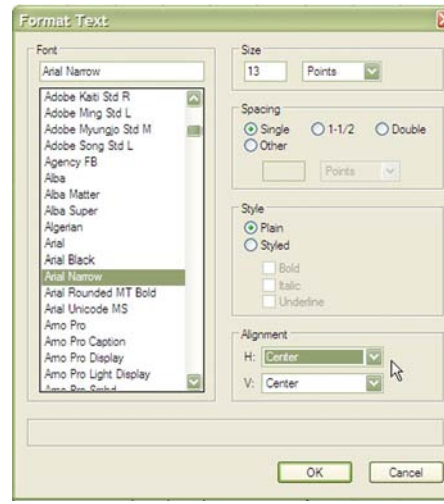
Using Text and Dimensions to Annotate your Plan

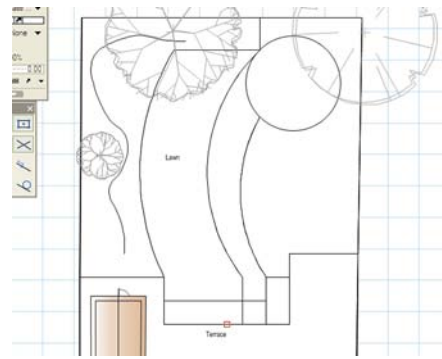


Exercise Twenty–One: Add Some Text

The text tools are varied, allowing you to create a simple text block on your drawing right through to creating labels using text from a set of commonly used notes held in the Vectorworks notes database. Default text size is determined in the Format Text dialog in the Text menu. In this dialog you can set the font, size, alignment and spacing of the text as well as font style (bold, underline or italic). Text can be rotated to any angle.

Label the Lawn and Terrace

For this, we will use a simple text block.



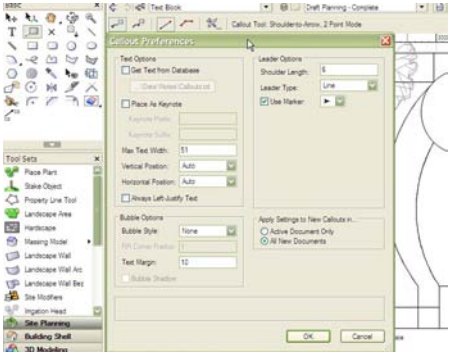
1. Under the Text menu, choose Format Text. Make any changes you desire for your text.
2. Make the Text Block class active via the Navigation palette.
3. Click on the Text tool in the Basic palette. Select it, and then click once on the lawn area. Type the word “Lawn”. Click on the terrace and type the word “Terrace”.
4. To update text, double-click on it with the 2D Selection tool and make your changes. You can also select the text and make changes to its formatting via the Object Info palette. Alternatively, if the Text tool is already selected, you can click on existing text boxes to make changes.

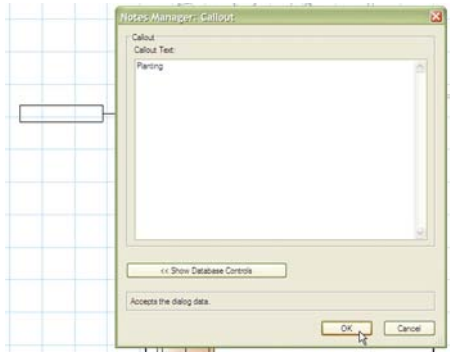
Note. You can move the text box in the same way that you can any other object on the Drawing area. If you want to create a block of text to fit in a specific space, select the Text tool and then drag a box onto the drawing before starting to type. The text will then be resized and adjusted to fit.

Label the Formal Planting Area with the Callout Tool

Callouts are text boxes with “leader lines” that point to the object being labelled. Callouts can be typed as required, or can be stored in a database and recalled as you need them (e.g. “All paving joints 10mm (½”)”). You will probably want to use this on most plans and can avoid typing it again since you can recall it from a list.

1. Select the Callout Tool from the Basic palette . From the Tool bar, click on the Callout Preferences button.
2. Here you can choose, for example, to justify your text to the left (it will usually default towards the leader line), if you would like to use a bubble style (to enclose the text), and if you would like to use a marker (e.g. an arrow) at the end of the leader line. You can also choose your favorite marker style. You can increase the text margin to increase the space between the leader line and the text. Examine the options and Click OK when you are finished making your choices.





3. The default mode for the tool is Towards Target, meaning your first click determines the position of the label. Click to the left of the left-hand boundary fence, and then click on the planted area on the left of the garden. When the dialog box opens, type “Planting” and click OK.

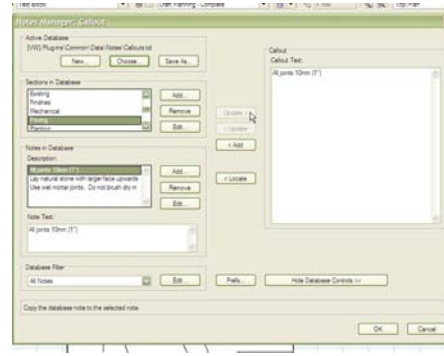
Note: The Callout tool’s Preferences dialog also allows you to pick notes directly from a database. In the following exercise you will learn how to setup your notes. You could then set the dialog to go directly to the database.

Using the Notes Database

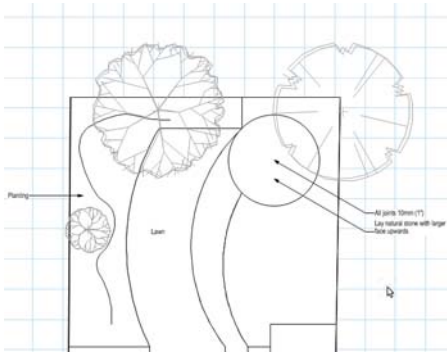
In this section you will learn how to add a new notes category, place some new notes in it and then use the notes on the drawing.

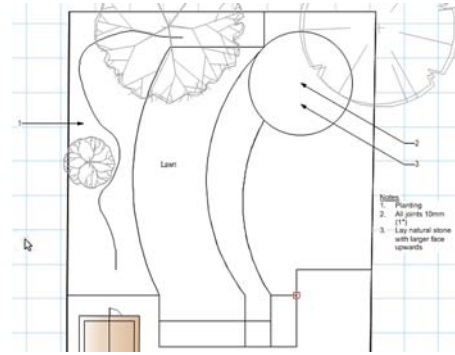
1. Change the Callout tool’s mode to Towards Text mode on the Tool bar. Click on the circular seating area. Hold down the SHIFT key to constrain your leader line to one of the preset angles, and then click to the right of the right-hand boundary fence. In the dialog box, choose Show Database Controls. The Notes Manager will open.

2. In the area titled “Sections in the Database” click Add. In the Notes Manager dialog box, type the word Paving. Click OK.



3. Ensure the heading Paving is selected. In the area below titled Notes in Database click on the Add button to add a new note into the Paving section. Type the words “All joints 10mm (1 inch)” into the dialog and click OK. Add a second note within the Paving category containing the words “Lay natural stone with larger face upwards”.
4. Highlight the “All joints 10mm (1 inch)” note and click on Update to choose this note for your callout. Click OK. When prompted to Save Database Changes, click Yes.
5. The note is placed relating to the seating area. Place another callout relating to the same seating area, this time select the note about laying natural stone.
6. Using the 2D Selection tool, select all three of the callouts, and via the Object Info palette,





click the box Place as Keynote. Notice the callouts are now numbered and relate to a separate text box with numbered notes. Move the notes box to a suitable position on your page. The use of keynotes can also be set via the Callout Preferences button before the callouts are placed.

Note: To add text that is not related to a specific object on the drawing, but rather to the whole project, use the General notes tool found in the Dims/Notes tool set. The General Notes tool uses the same database functionality, but a notes object can use more than one note. A text box is placed on the drawing, and all the notes are automatically numbered. However, the notes can be easily updated, re-ordered and have the text format can be changed.

Exercise Twenty–Two: Adding Dimensions to the Plan

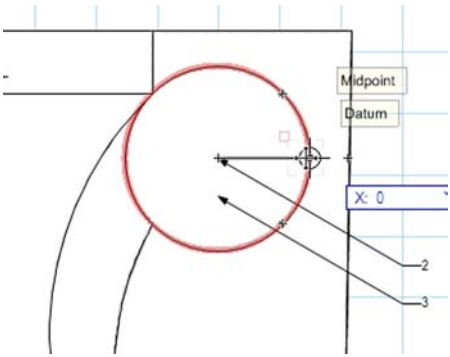
One of the things I found most tedious about hand-drawing was writing in all the dimensions. Vectorworks provides all the tools you need to place accurate dimensions onto the plan wherever you choose. It also gives you the ability to show dimensions for circles and arcs. In our imaginary garden, we will be able to provide accurate information on how to build the garden, including the curved path. It's important to make such specifications at this early stage because once we have converted these shapes into different types of objects, the dimension tools may no longer recognize the curves. The plan is still very simple, which makes the dimensions easy for your contractor to work from.

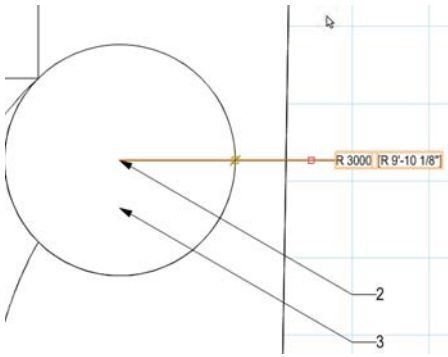
The tools are found in the Dims/Notes tool set and they work in a similar way to the Tape Measure tool, which you've used already. For a simple linear dimension, you click on the first point, click on the second point, and then click where you would like the dimension text displayed.

When you create dimensions, they are automatically placed in a class called Dimension, so that you can make them invisible in certain contexts. You may want to create subclasses of the dimension class in order to control the visibility of different types of dimensions (e.g. levels etc.)

Note the Dimension of the Circle

1. Ensure nothing is selected on the drawing by clicking on a blank space with the 2D Selection tool. Return to the Format Text dialog in the Text menu.
2. Reduce your font size and make any other changes you want. In my case, I want to have a smaller font for dimensions than the callout text and other text boxes. Select the Radial Dimension tool in the Dims/Notes tool set. On the Tool bar, choose the Interior Radial Dimension Mode button. Move the cursor onto the circle and notice it changes to a cross and the circle highlights in red. Vectorworks is showing you objects on which you can place a Radial dimension. It will ignore objects which do not contain arcs. Click anywhere on the circular seating area to mark the center and show the radius of the circle. Click again, just outside the circle to place the radius dimension label (or inside if you prefer your dimension





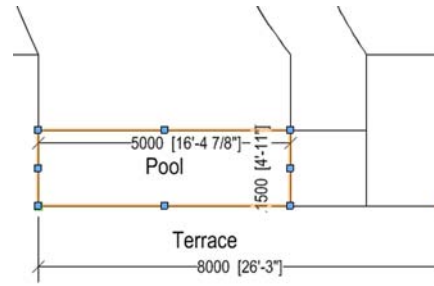
to remain inside the circle.) Note that the tool also has modes for measuring the diameter.

Note the Dimensions on the Terrace

1. Select the Constrained Linear Dimension tool from the Dims/Notes tool set. Click on the lower left corner of the Formal Pool. Click on the lower right corner of the planting bed. These two clicks tell Vectorworks which length you want to measure. Click a third time to position the text and "witness" lines.

You are now going to use the same tool to place dimensions automatically for a selected object.

2. Using the 2D Selection tool in the Basic palette, select the rectangle that will become the pool.
3. From the Dims/Notes tool set, select the Constrained Linear Dimension tool again. From the Tool bar, choose Selected Objects mode. Click once inside the selected rectangle. Click again either above or below the rectangle. A horizontal dimension line is automatically created.



4. Repeat the above step, but this time, for your second click, hold down the Alt/Option key before clicking. This will produce the vertical dimension.

Note: My dimension text is rather lengthy. That's because I'm showing both imperial and metric dimensions together. I would usually just use one or the other. Your dimensions should look more manageable and show just your chosen unit of measure (as set in the chapter on Setting Up Your Drawing Board).

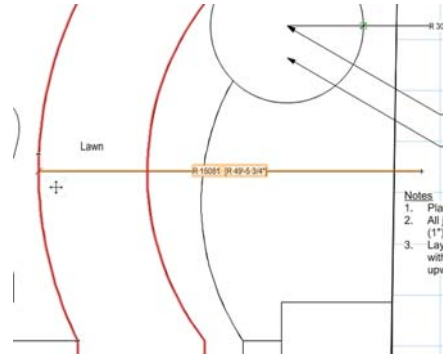
Note: I have used metric dimensions when drawing my objects. If you are using imperial, your measurements may not match mine. This is because in my instructions I have rounded up where sensible for imperial users. If you've followed the imperial measurements your dimensions will reflect this.

Note the Dimension of the Curved Path to the Circle

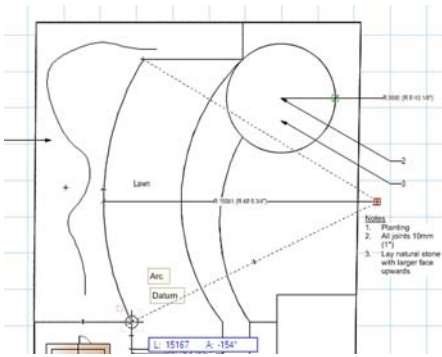
The new curve modes (including Arc Tangent to a Line and Point on Arc) are great for designers—you can draw the curve you want for your design and then you can add dimensions to show someone how it's to be built. The Radial Dimension tool can be used to add radial dimensions to curves made from arcs and standard circles. (If you used the Bezier or Cubic modes, the Circular Dimension tool can't be used on the curve).

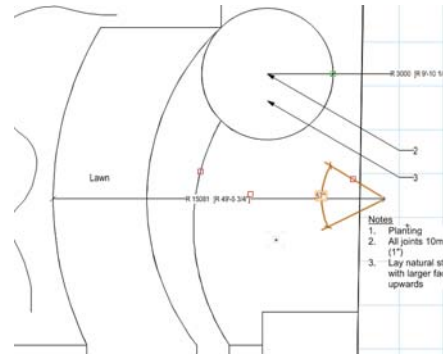
In our design, we've used Point On Arc curves, and created a number of arcs on the drawing. We are now going to use the Radial Dimension tool again to provide information about these

arcs.



5. Select the Radial Dimension tool from the Dims/Notes tool set. Ensure it is set to Interior Radial Dimension mode on the Tool bar. Click anywhere on one of the curves in the drawing. The tool recognizes the arcs as part of a circle and creates a dimension line to the center of the arc. Click again to place your dimension text.
6. Now that we have the center point and radius marked, we need to measure the sweep of the arc. Select the Angular Dimension tool from the Dims/Notes tool set. Choose Angular Dimensions from Two Reference Lines mode on the Tool bar.
7. Click on the top of the arc, then the center point (as marked by the Radial Dimension tool above), and then on the bottom of the arc. Two grey lines will appear, as well as a curved line either inside or outside the reference lines. Move the cursor inside and outside of the two gray lines and notice that you can measure either the interior or exterior angle. Ensure your cursor is inside the two lines and click where you want to place the interior angle text.





As mentioned above, Dimension objects are automatically placed in the Dimension class, which Vectorworks creates in any new drawing. This gives you the flexibility to show or hide the dimensions as you wish.

8. On the Navigation palette, change the Dimension class to invisible. Note that all your dimensions disappear. Change the class back to visible and the dimensions will reappear magically! You are now developing a multipurpose drawing.
9. Save your work. If you have not completed this exercise, you can open the file Dims and Text-Completed.vwx before moving on to the next section.

Note: The center of my arc is in the neighbor's garden, which is not ideal! However, in this case, using artistic licence, we are going to assume that we are replacing the fence and

the neighbor does not mind us measuring from his plot!

Further Reading - Change Your Dimension Preferences

The way dimensions are displayed can be set in the Dimension Preferences dialog box, (found in the File/Document Settings/Document Preferences dialog box, by clicking on the Dimensions Tab.

NOTE: There are a number of industry standards for dimensions available, but you can create your own "standard" and have dimensions appear exactly as you want them. Once you have setup your dimension standard, I suggest you update your template so that this specification carries over into any file you work on.