# SITE DESIGN
HARDSCAPE SETTINGS

In this chapter, we are going to explore Hardscape Settings. We will look at how to configure both the main joint patterns, border, 3D representation, and other data options.

To begin, lets take a look at how this hardscape is configured. Notice that this is a fairly basic hardscape. It just has a simple flagstone join pattern. This pattern is applied through the Hardscape Settings.
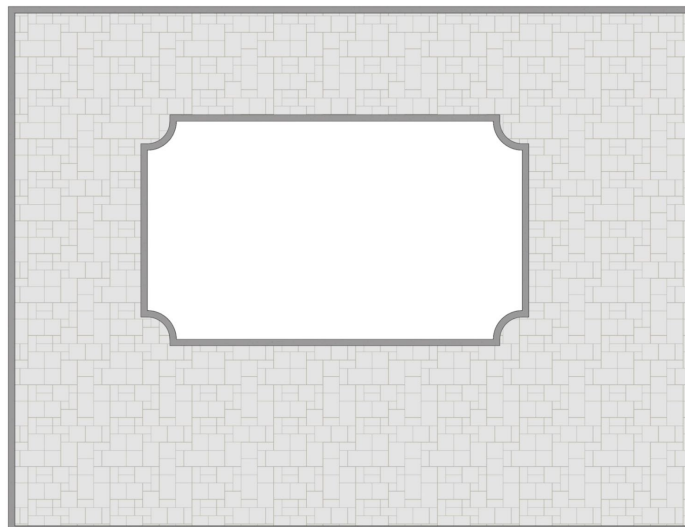
As with all objects, the first place to look to edit or modify an object is the Object Info Palette. Here we can see several oditable options from general options, tag settings, 3D settings, and other information. To see all avaiable settings, just click the Hardscape Settings button towards the top of the palette.
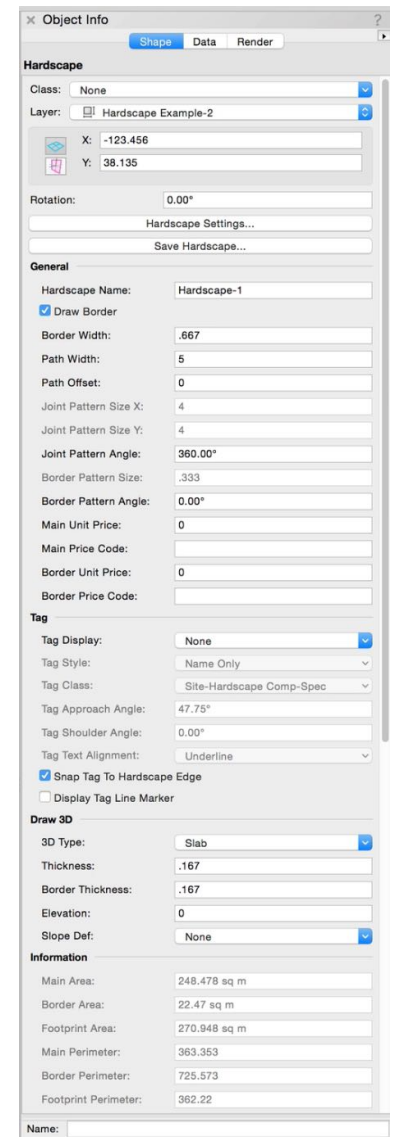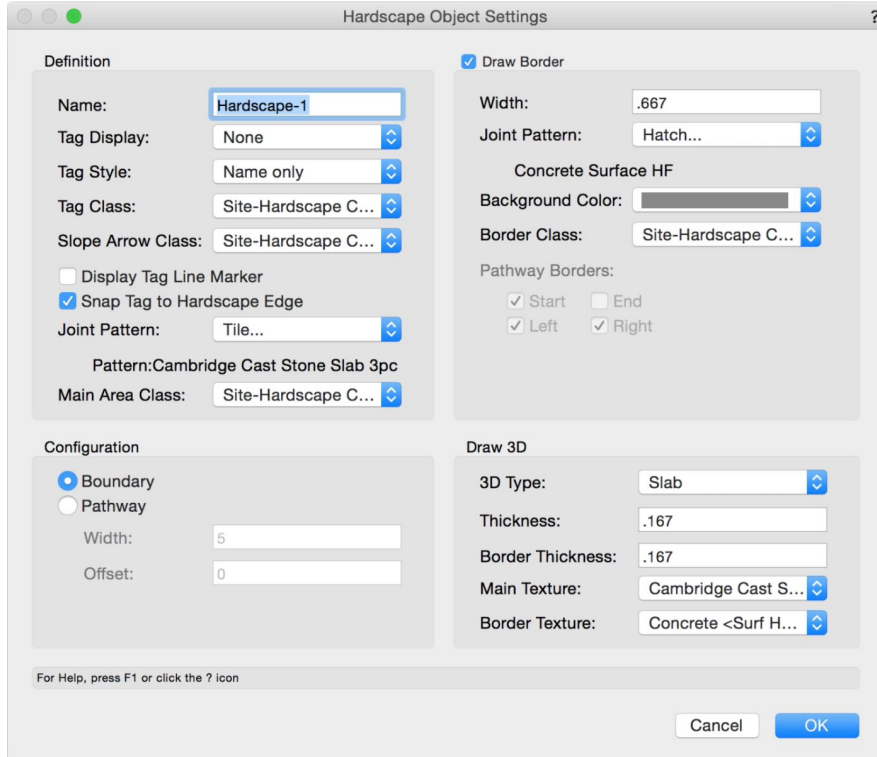

In the Hardscape Object Settings dialog, we can adjust tag, joint pattern, configuration, border, and 3D settings. Under Defintion, lets jump right to the Join Pattern Options.

After clicking the Joint Pattern drop-down menu, we see a list of pattern options.
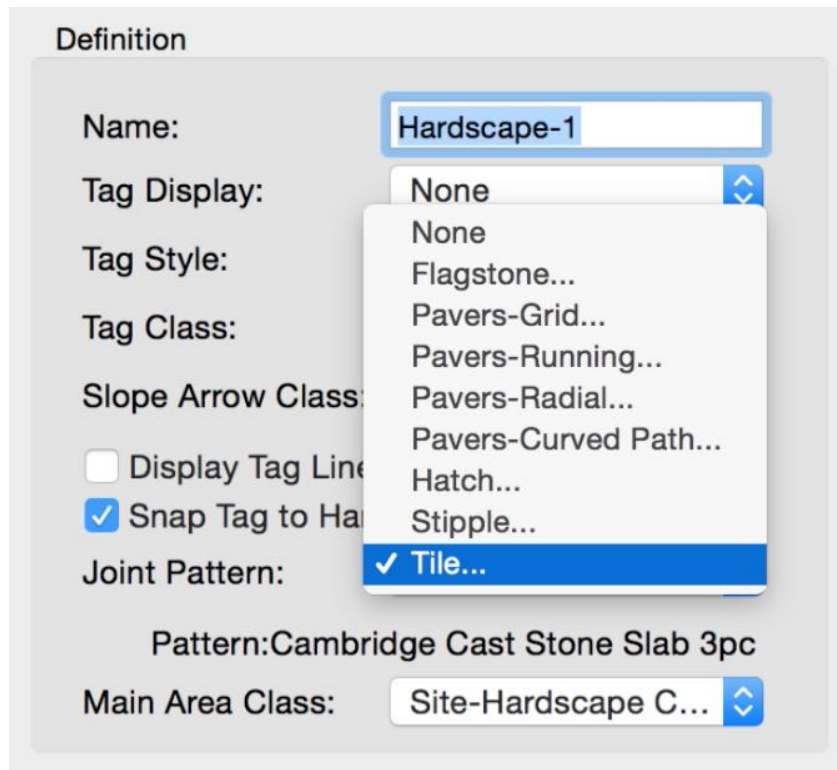
The first few options: Flagstone, Pavers-Grid, and Pavers-Running all generate a pattern based off size and angle settings.
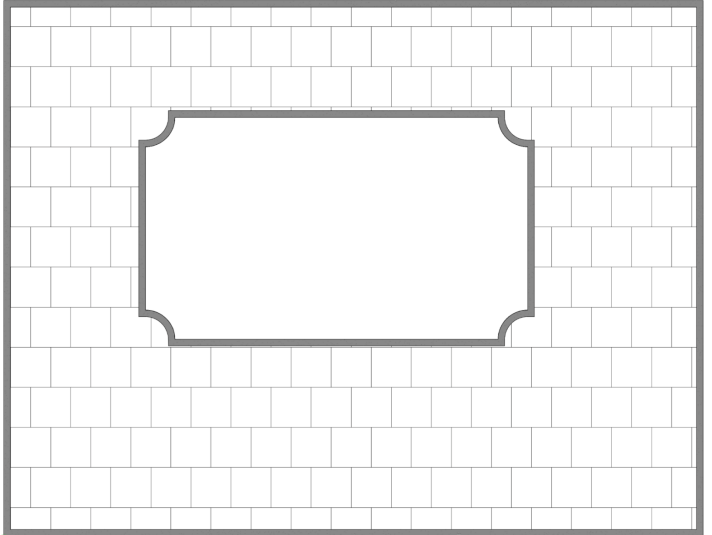
Flagstone creates a patterned style flagstone.
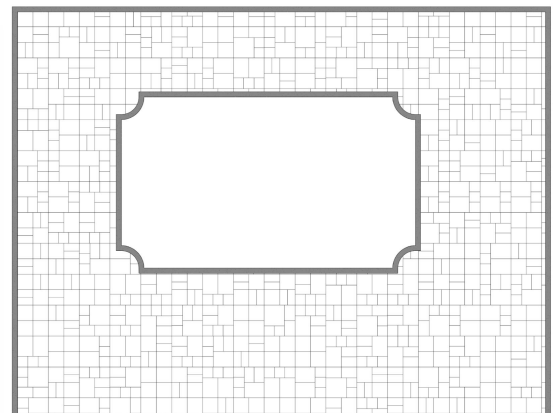
Pavers-Grid will create a simple grid pattern. Pavers-Running will create a nice even offset with the Running Bond Pattern.
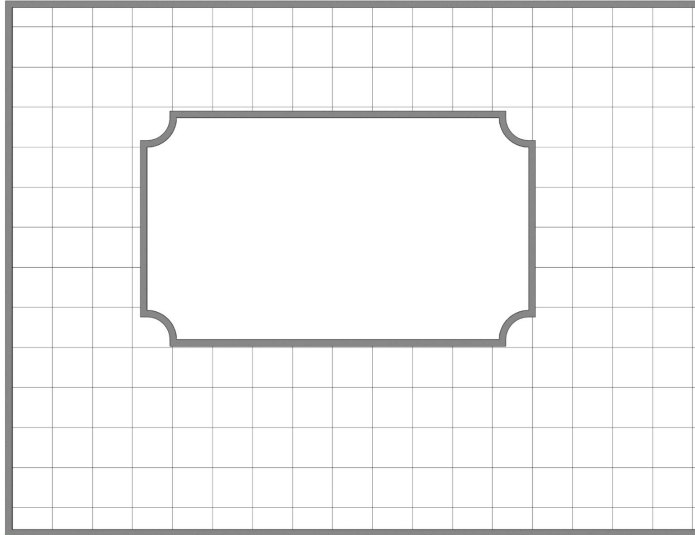
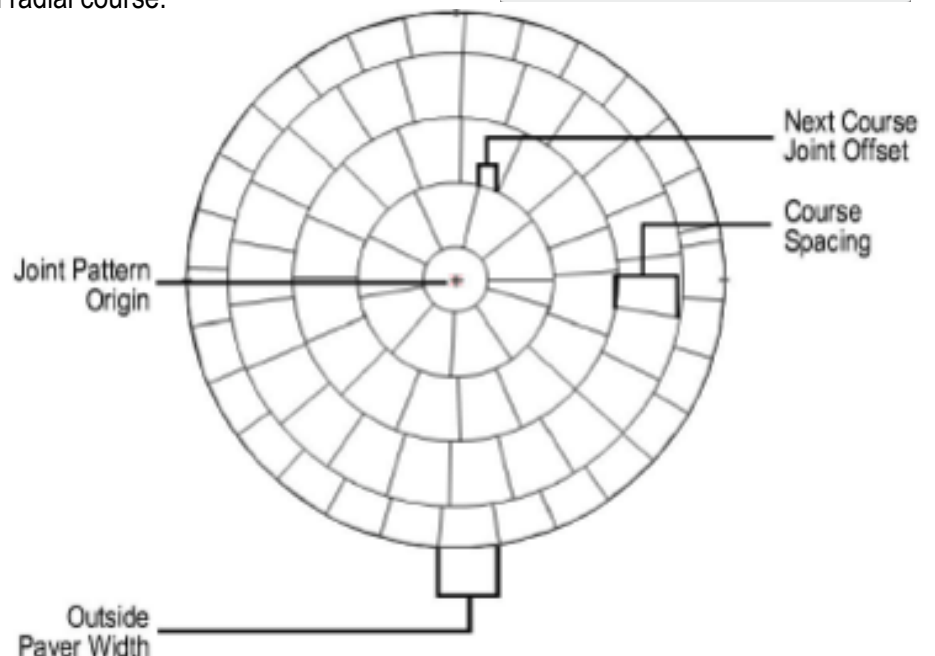(Pavers-Grid Above)   (Pavers-Running Above)

The last two Paver options: Pavers-Radial and Pavers-Curved path use different controls. The Pavers-Radial option can only be used on a Boundary Hardscape Configuration. This option will not work with a Pathway configuration. In the Set Radial Pattern Options dialog, we have various controls for the pattern.

The Course Spacing controls the distance between the concentric curves. This is essentially the length of the pavers.

We can set the Center Stone Diameter.

We have settings for the Next Course Joint Offset. Here we can choose how to determine the offset between each radial course. This can be set by Width, Angle, or a shift percentage.

Finally, the Pver width can be set by the outside or inside paver width, or by specifying a set number of pavers for each radial course.

Set Radial Pattern Options	?
Course Spacing:	3
Center Stone Diameter:	4
Next Course Joint Offset:	
◉ Width:	1
○ Angle:	10.00°
○ Shift (%):	50
Paver Width:	
◉ Outside Paver Width:	2
○ Inside Paver Width:	1
○ Paver Count:	8

Set the offset between joints in adjacent courses of the radial pattern as a width in this control.

Cancel   OK

Next Course Joint Offset

Course Spacing

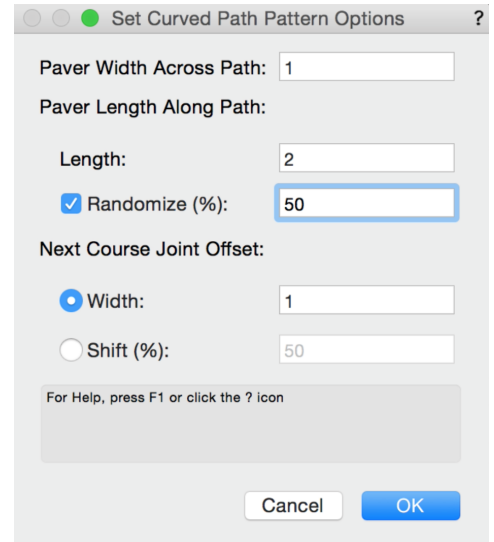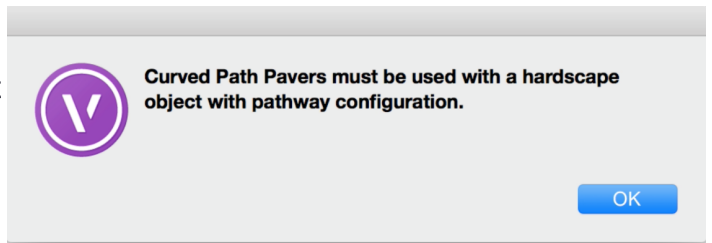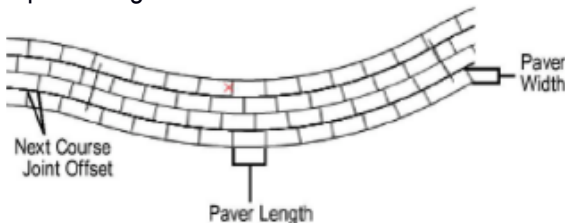Joint Pattern Origin

Outside Paver Width

The Pavers-Curved Path option can only be used on a Pathway Hardscape configuration. An error dialog will appear if you try to apply this option to a Boundary Hardscape.

In the Set Curved Path Pattern Options dialog, we can adjust this patterns options.

First we can aset the paver width. This is the width going perpendicular to the path.

Next, we can set the paver length and randomization. The length is measured along the path and is the maximum length of a paver. If the Randomization option is enabled, the paver length will be varied. If the paver length is 200mm and the randomize percentage is set to 50, the pavers will range from 100mm to 200mm in size.

The last option sets the Course Joint Offset. This can be set by width or by a shift percentage.

The first five joint pattern options, all generate a pattern based off specified options. The next pattern options, apply a pre-configured attribute to the Hardscape. These can be hatches, stipples, or tiles. Hatches and tiles are fairly similar to the paver options with a few differences.

Hatches can have more complex line patterns. These include patterns that resemble crushed stone, dogbone and fish scale. It also includes many from the manufacturer libraries.
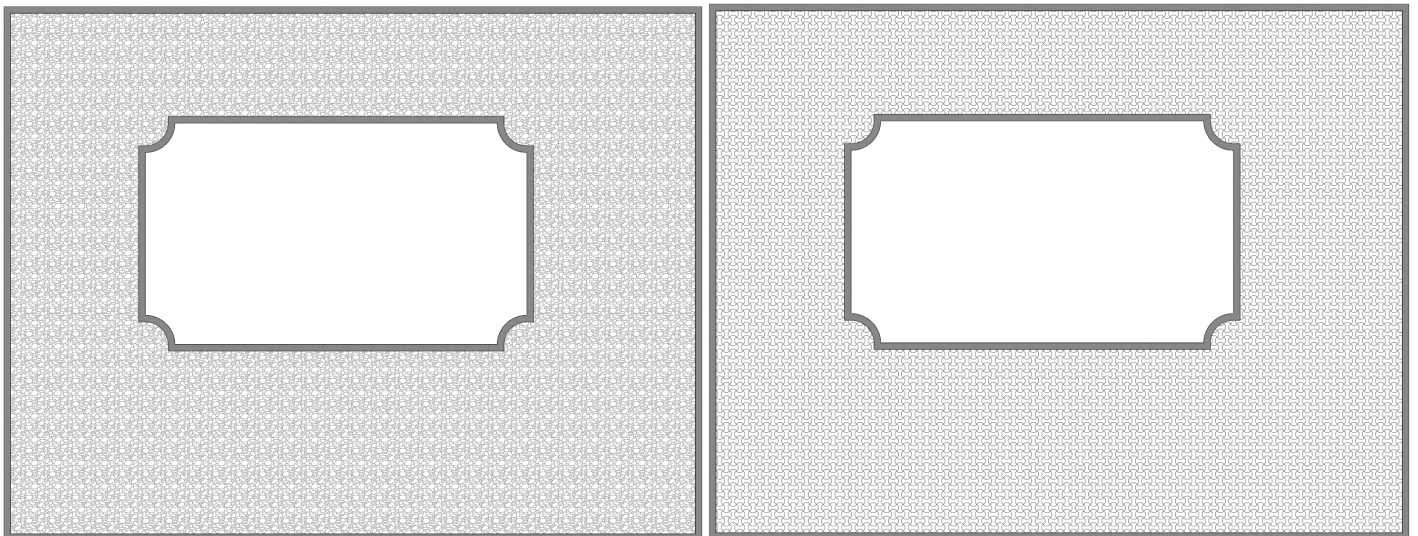
Tiles, though similar to hatches, tend to be more vibrant and have a higher level of detail. There are several libraries to choose from or a custom tile can be created thrugh the Resource Manager.

(Examples on following page)
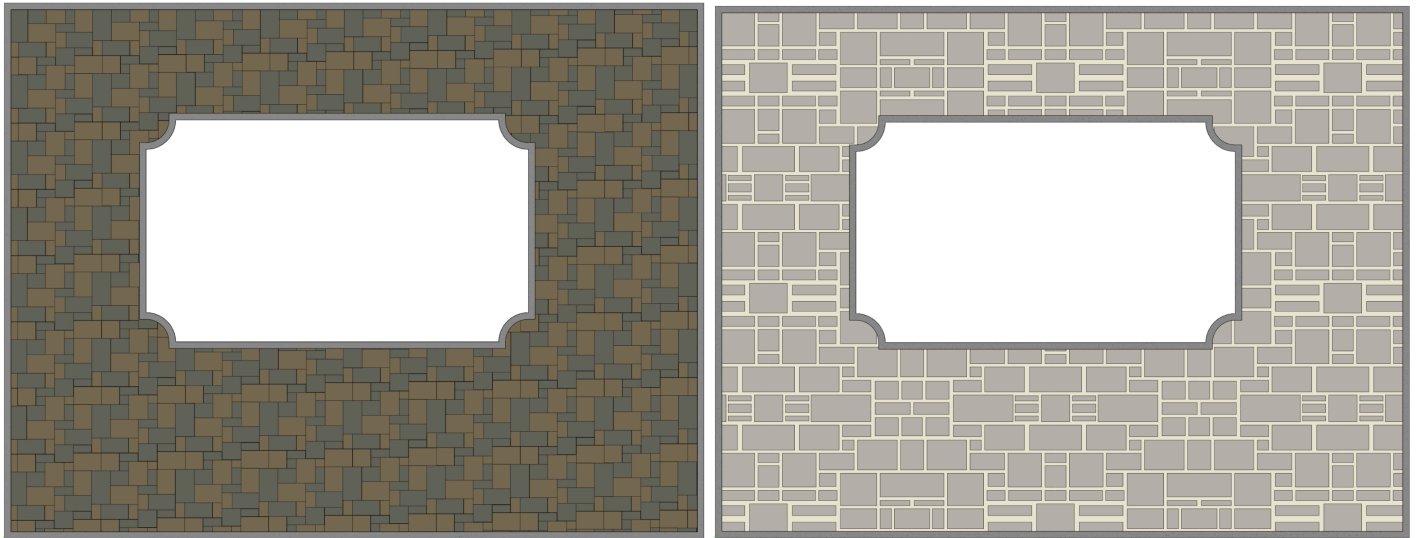
(Tile Examples Above)

Stipples are good for generating a material effect on the Hardscape. Stipples create a random pattern of different shaped objects. This type of attribute can be fairly complex.
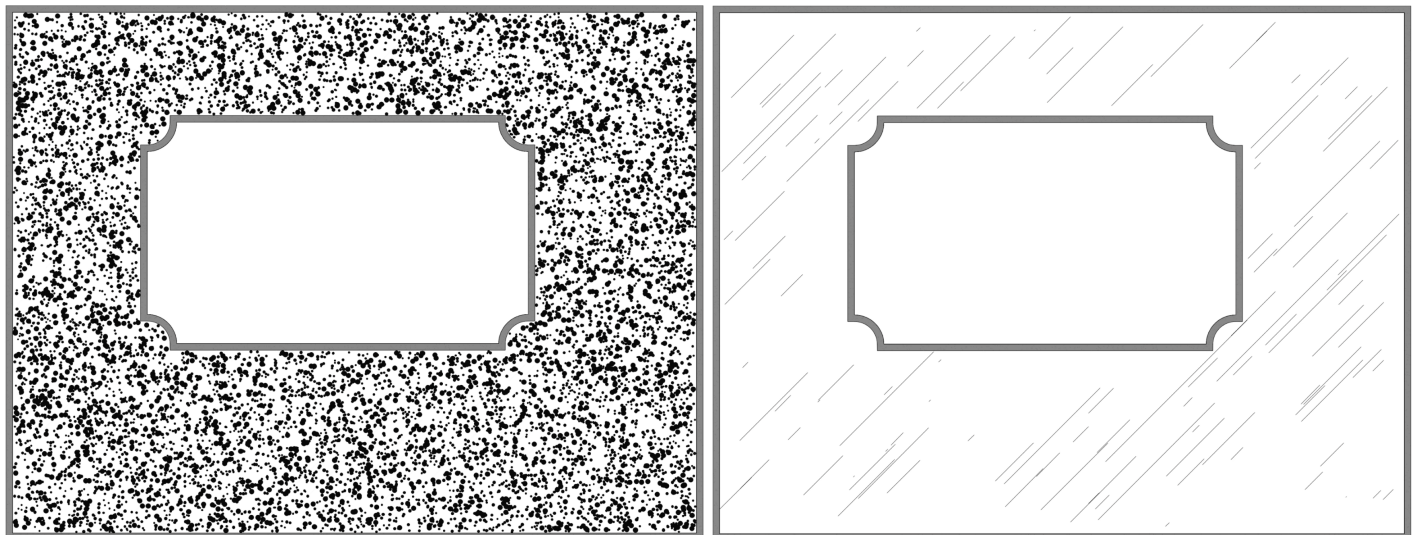
Now, lets go back and look at the other options under Definition. To start, we can give this Hardscape a name. This will be useful later when creating a Hardscape report. It will allow us to easily distinguish between different hardscape types and estimate cost of material.

There are also tag options. We can set the tag display, style, and class.

Tag display can be set to right, left, floating, or None.

The tag style can be set to show only the Name, the Name and Area, or the Name, Area, and Perimeter.

The visibility of the tag can be controlled using an assigned class.

There are also class options for the Slope Arrow and Main Area.

The Tag Line Marker can be enabled or disabled using this check box as well as turning on and off edge snapping for the tag.

Definition

Name:	Hardscape-1
Tag Display:	None
Tag Style:	Name only
Tag Class:	Site-Hardscape C...
Slope Arrow Class:	Site-Hardscape C...
☐ Display Tag Line Marker	
☑ Snap Tag to Hardscape Edge	
Joint Pattern:	Tile...
Pattern:Cambridge Cast Stone Slab 3pc	
Main Area Class:	Site-Hardscape C...

Below the Definition settings, we can choose the Hardscape Configuration. We have discussed the two configuration options, Boundary and Pathway in a previous chapter. In this section, if Pathway is enabled, we set the Width and Offset values for the path.

In the top right of this dialog, we can enable the Border and adjust its settings.

The first setting adjusts the width of the border.

The Joint Pattern will change the pattern applied to the border, allowing there to be different patterns applied to the main hardscape and border.

The Joint Pattern options include Spaced Joints, Hatch, Stipple, and Tile.

Spaced Joints have an adjustable joint spacing value while the final three options (Hatch, Stipple, and Tile) work the same way as the main joint pattern.
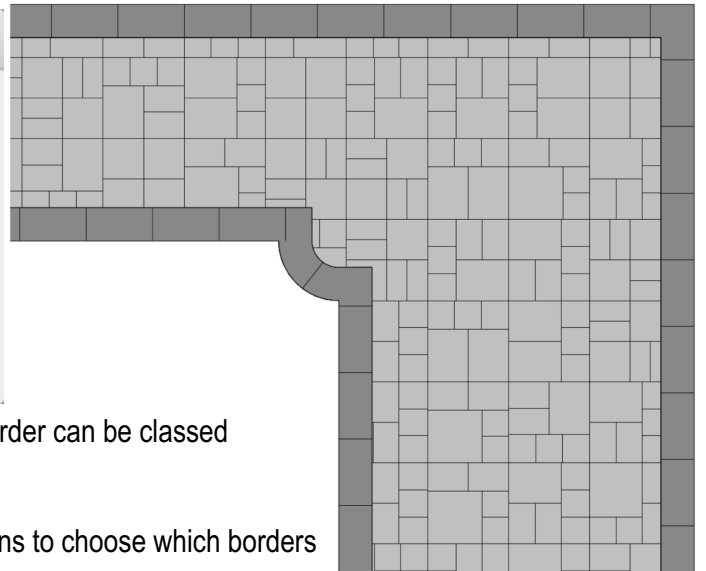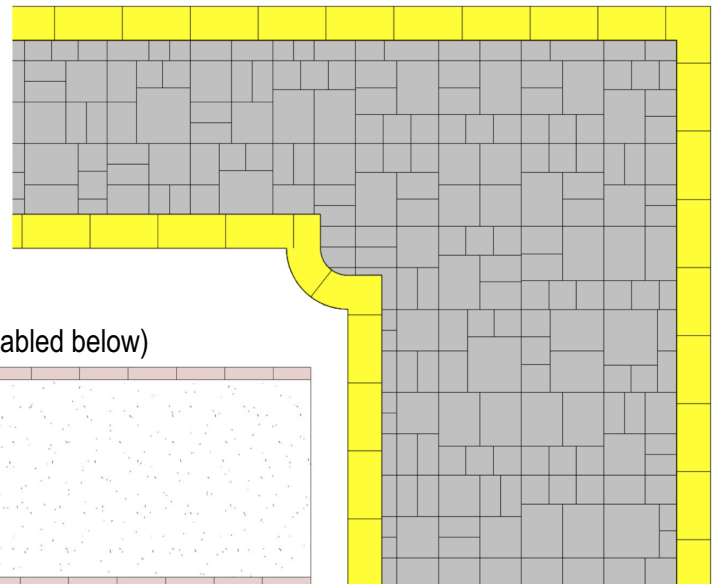

A Background Color can be set for just the border and the border can be classed separately from the main joint pattern.

Finally, if a Pathway configuration is selected, there are options to choose which borders are displayed (Start, End, Left, and Right).

For example, for a typical pathway, the start and end borders will be disabled.

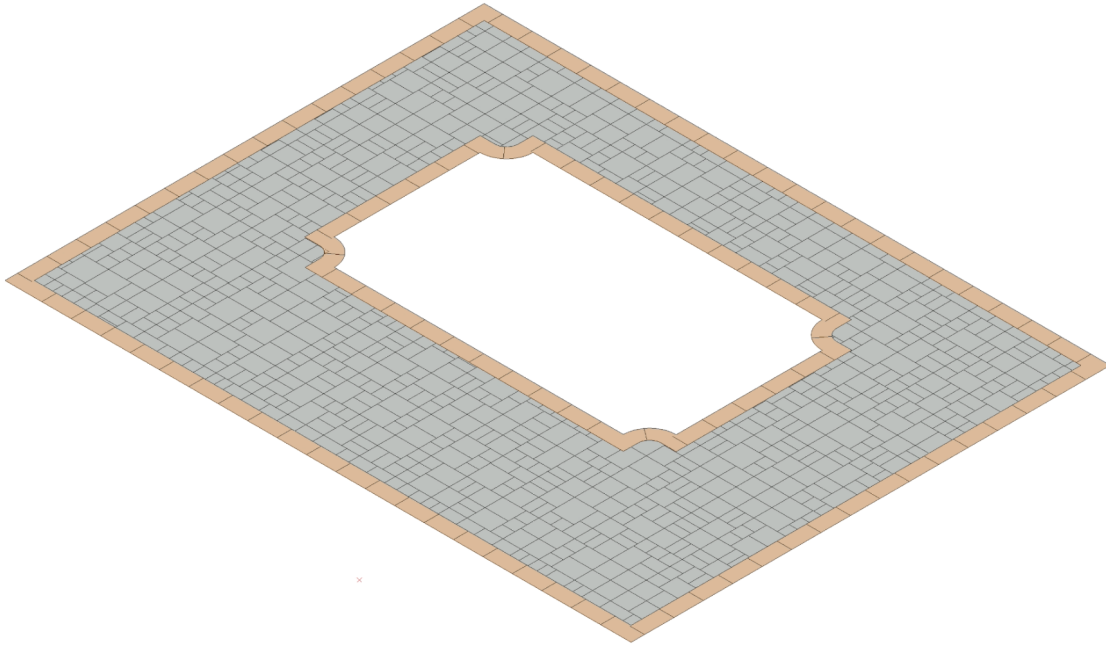(Example of a Pathway with Start and End disabled below)
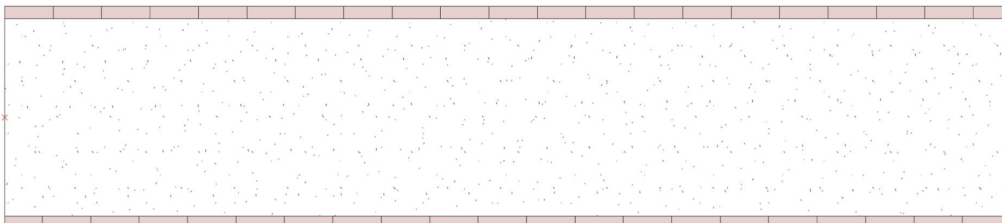
The last section in the Hardscape Settings dialog, controls the 3D representation of the Hardscape.

The first option sets the 3D type. This can be set to None, Slab, or three different Site Modifier Options.
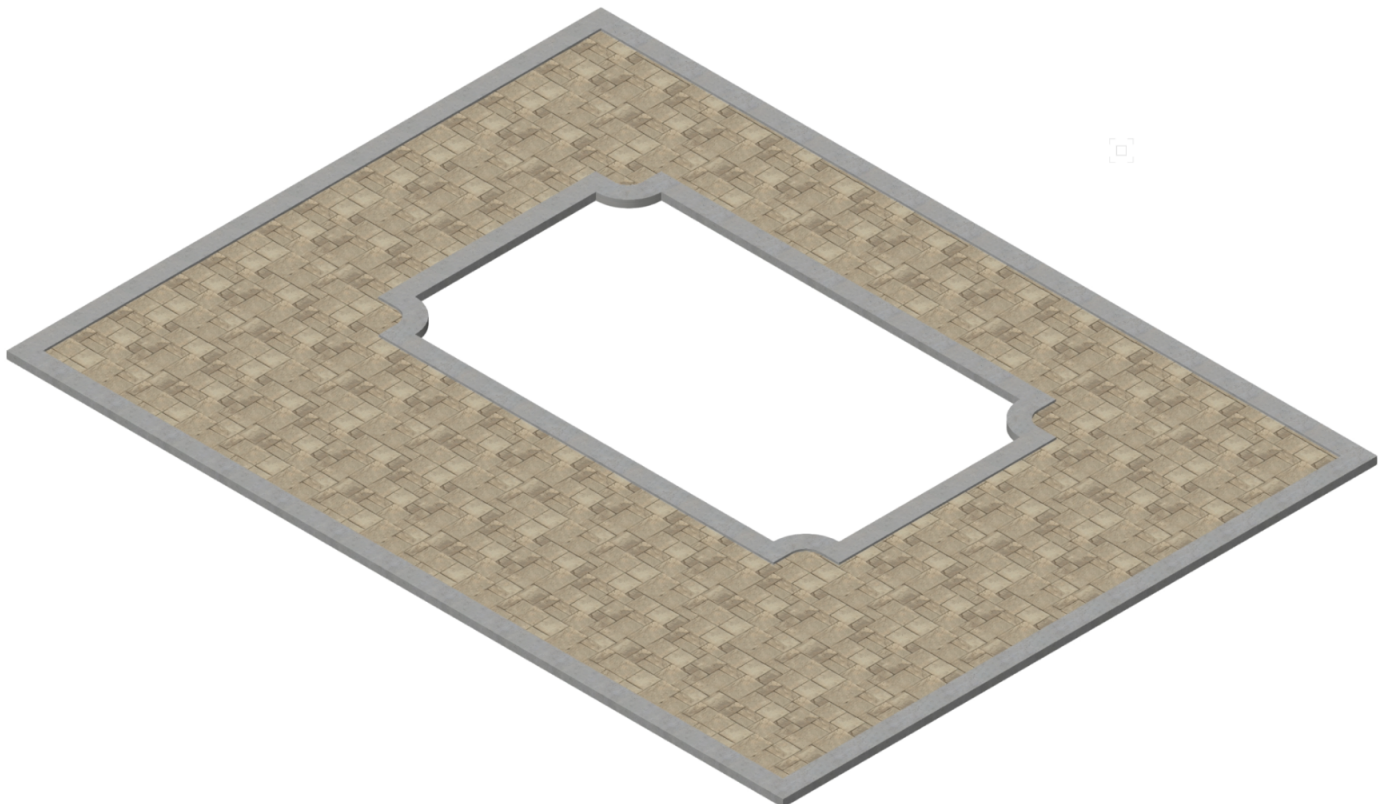

None creates a 2D only Object.

Slab creates a 3D object with independant thicknesses for the main area and border.

The last three options create a site modifier along with the 3D representation. We will discuss Site Modifiers in more detail in another chapter. Please refer to the Site Model chapters to better understand Site Models and Site Modifiers. Site modifiers can change the elevation of a site model, limit the effect of other Site Modifiers, or apply attributes to an area of a Site Model.

The first two Pad Modifier options set the position of the pad relative to the Top or Bottom of the Hardscape. These options also generate a 3D slab representation of the Hardscape.
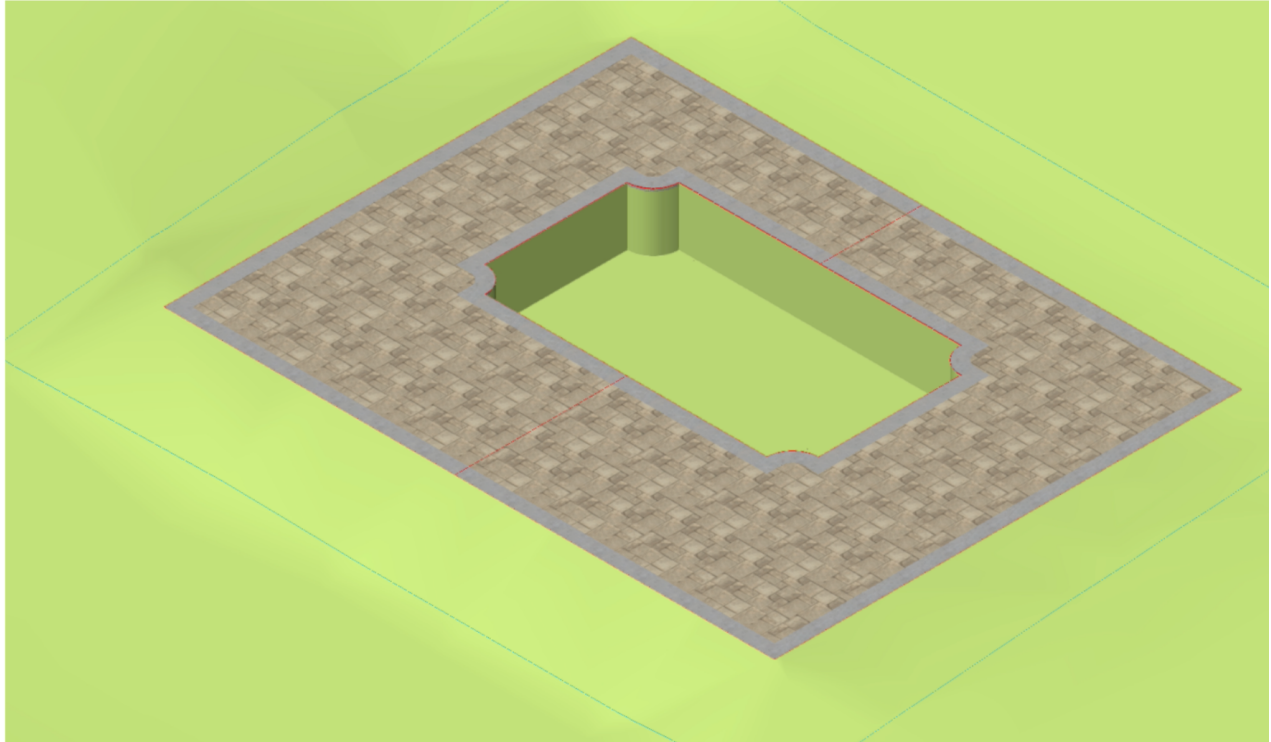

(Above Image - Pad Relative to Top)
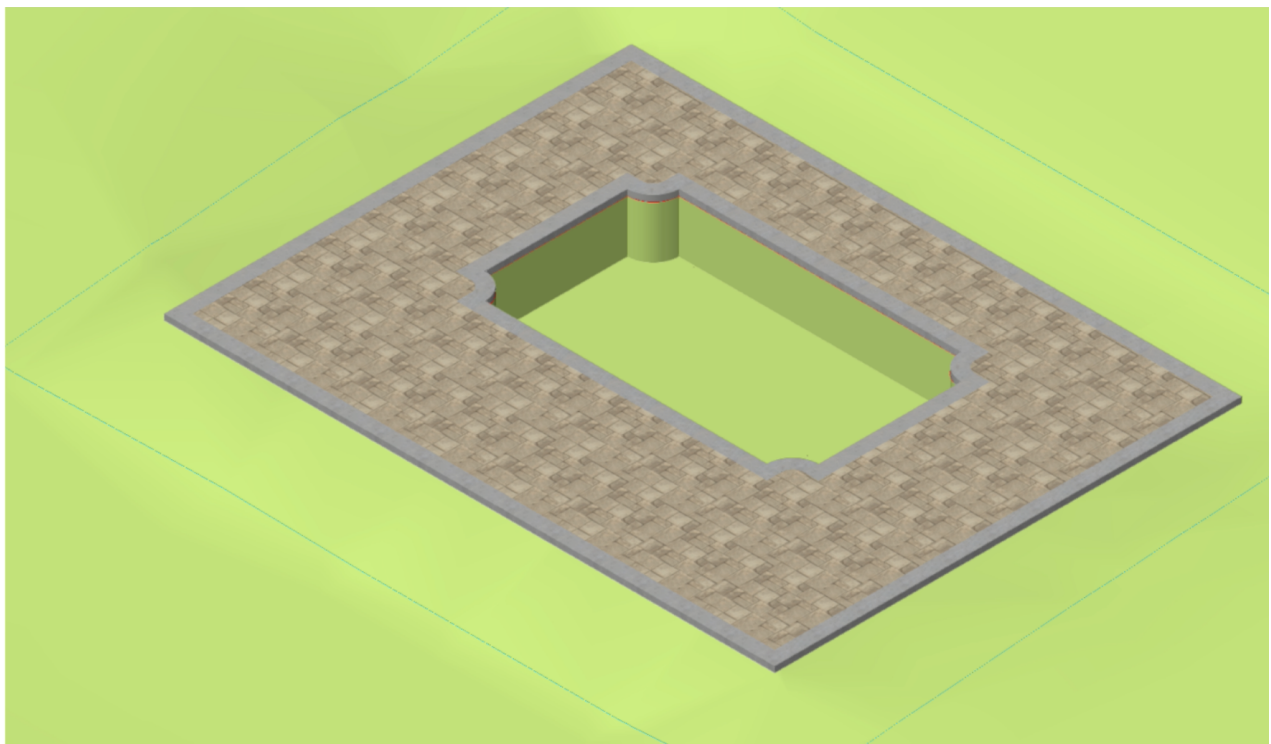
(Above Image - Pad Relative to Bottom)

The last modifier option, Texture Bed, applies a texture within the area of the Hardscape on a Site Model. No 3D geometry is created when using this option. The selected texture will be displayed on the top surface of the Site Model. Attributes for the 3D representation of the Hardscape come from the Main and Border Texture options.
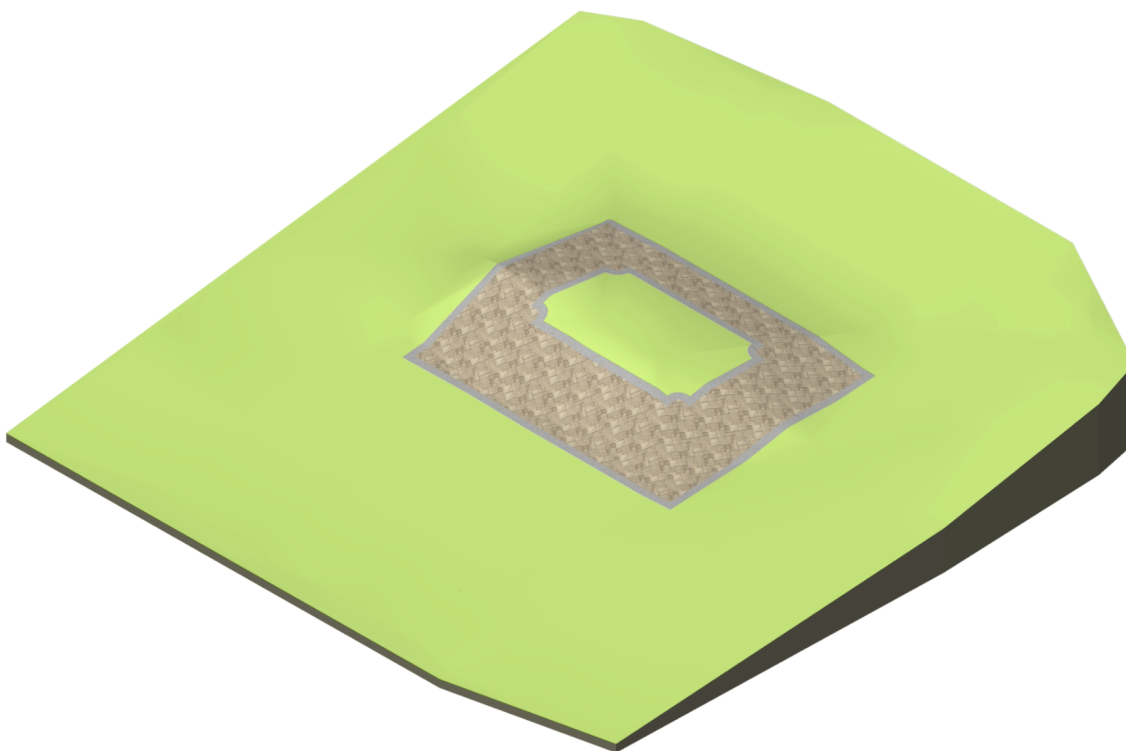
Many of the settings found in the Hardscape Object Settings dialog can be quickly accessed directly through the Object Info Palette as well. There are also a few options and some information only available in the Object Info Palette.

For example, there are options to set Main Unit and Border Unit Prices and Prices codes. This information can be used for costing when displayed in a Hardscape report.

Ths Object Info Palette also displays various information about the selected Hardscape object. The Main, Border, and Footprint area and perimeter are displayed for quick reference.

Also, if the Hardscape is on a Site Model, specific site data is displayed including projected area, surface area for both the existing and proposed model, existing and proposed volume, and cut and fill data.

Now that we have learned how to configure a Hardscape, lets take a look at how to save and apply a predefined Hardscape Style. In the Creating Hardscapes chapter, we briefly discussed the first option of the Hardscape Tool in the Tool Bar. This option allows for the selection of a Hardscape Style. There are multiple libraries to choose from.
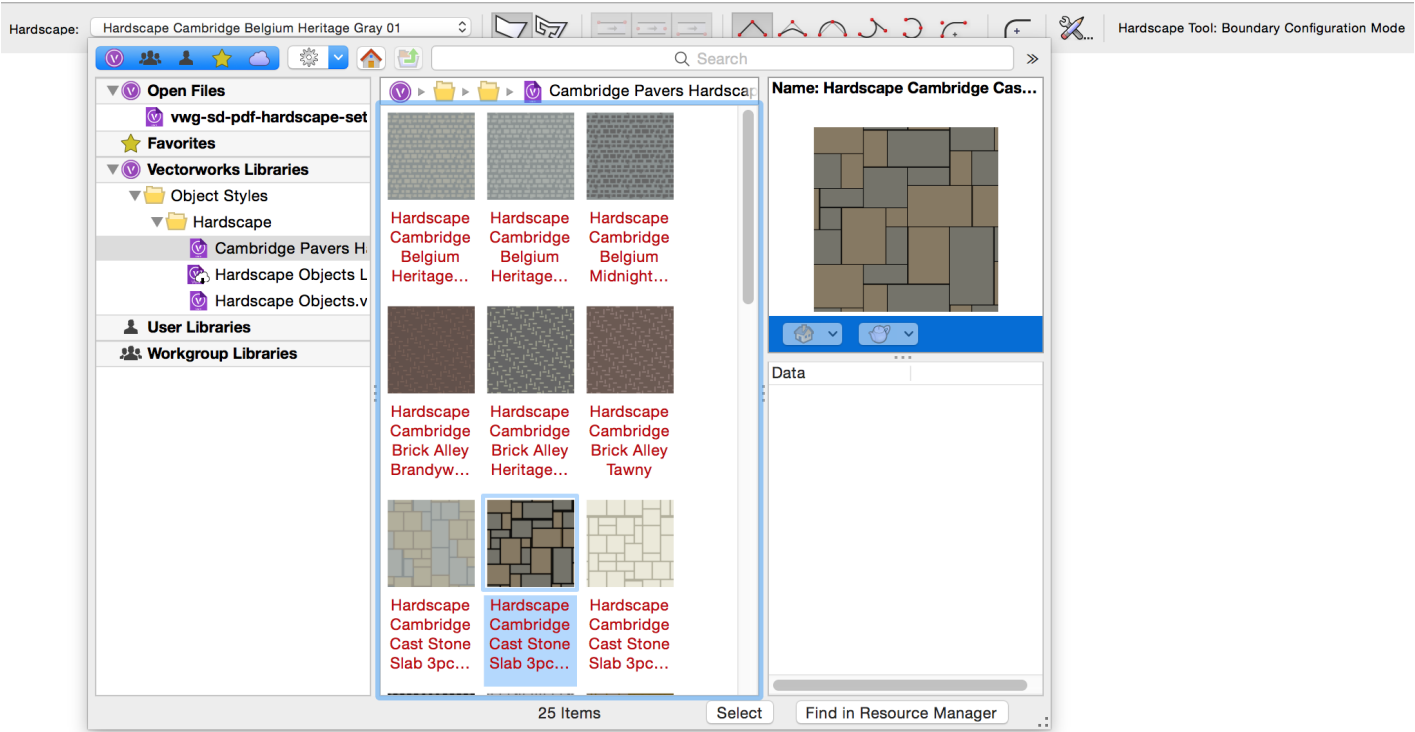
It is also possible to save your own Hardscape Style. Once a Hardscape is configured, it can be saved and used when creating new Hardscapes. To save a Hardscape Style, just select the configured Hardscape and click the Save Hardscape button in the Object Info Palette. The Hardscape will be saved in this file's resources and can be accessed through the resource manager. These can also be addded to a favorite file for easy access later.