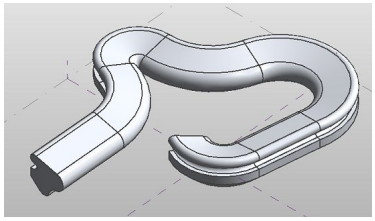
Please Note: If you're new to Revit, you may be interested in my " **Beginner's Guide to Revit Architecture** " **84 part video tutorial training course** . The course is 100% free with no catches or exclusions. You don't even need to sign-up. Just enjoy the course and drop me line if you found it useful. The full course itinerary can be viewed here

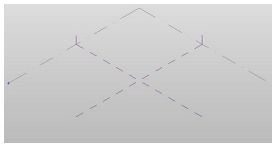
In this article we are going to look at how to create a solid **Sweep** form, from within the **Conceptual Design Environment** . If you are totally new to the Conceptual Design Environment (or CDE) within Revit, I suggest that you may wish to read this article first .



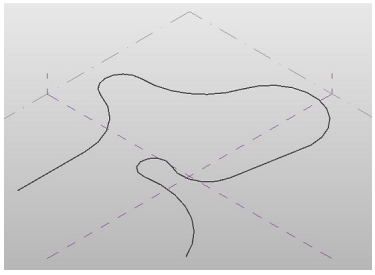
A Sweep is a 3D form that is created when you "**sweep**" a 2D profile along a 3D path. Along with " **Extrusion**" it is one of the most useful ways of creating 3D geometry within Revit. You'll find yourself using it time and again.

Before we get started with an example, a little bit of theory first. Your **2D profile** can be either open or closed.
HOWEVER
: If the profile is open, then your path
MUST
be a single line (either straight or curved). If you wish to sweep along a multi-segment line, then your 2D profile
MUST
be a closed loop. In both cases your Profile needs to drawn on a plane that is perpendicular to your path.

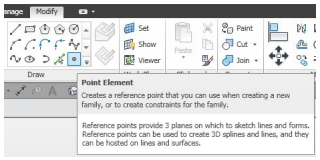
OK. Enough with the theory, let's get on and produce a Sweep. I'll start with a fresh "**Conceptu al Mass** "
family template…



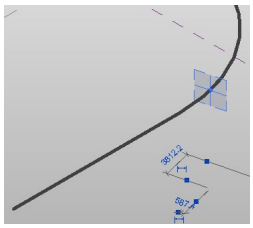
You will probably find it easier to draw your path *first*. In the image below you will see that I have just used the line tools to sketch out a funky, curvy path…..



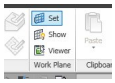
Now as we said above, we need to draw our profile on a plane that is “Perpendicular” to our path. The easiest way to do this is to place a “**Point Element**” onto the path. This will automatically generate a plane at right angles to the line the point is placed on. You will find the “ **Point Element**” tool located on the “ **Draw**”menu …



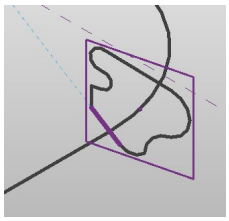
In the image below you will see that I have placed a "**Point element**" onto the path and then selected it. Upon selection the temporary plane is revealed….



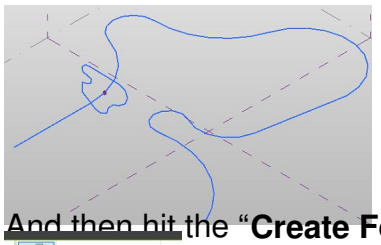
Before I can sketch the profile I need to set the current Work plane to the one produced by the Point element. I simply do this with the "**Set Work plane**" tool…



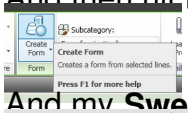
And then clicking on the Point Element. I can now sketch out my 2D profile. Remember: As my path is “multi-segment”, my profile **MUST** be a closed loop. So here is my completed profile…



You can see in the above image that the work plane is highlighted while we are still in drawing mode. To produce our 3D Sweep all I need to do is select **BOTH** the **path** and the **profile**…



And then hit the “**Create Form**” button……



And my **Sweep** is then created….