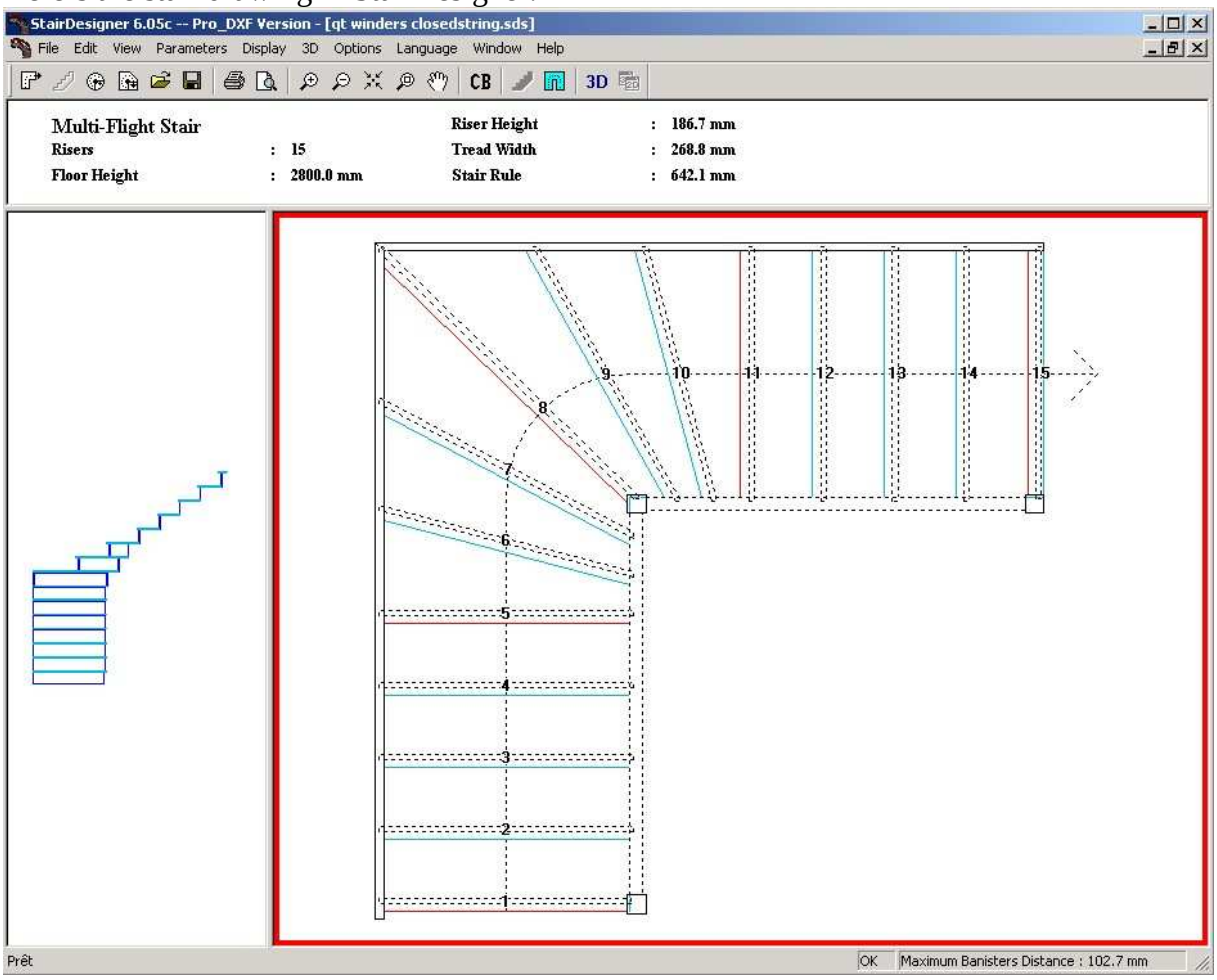
Using a stair template

The quickest way of designing a stair is to just take an existing stair design and edit it to fit your project.
You can download a example stair project from the download page of this site. Each example contains the StairDesigner file and all the workshop documents to make the stairs.
If the stair fits your needs you can just take the plans and start building, but it's more likely that you will have to adjust the stair dimensions to your specific project. With StairDesigner adjusting a model stair to fit any size is very fast and easy.
In this article I'm going to show you how to take one of our model stairs and make it fit another completely different stair well.
If you want to learn how to design a stair from a model, take a look at the video on my web site, you can then read this article, download the original model and follow the steps through yourself.

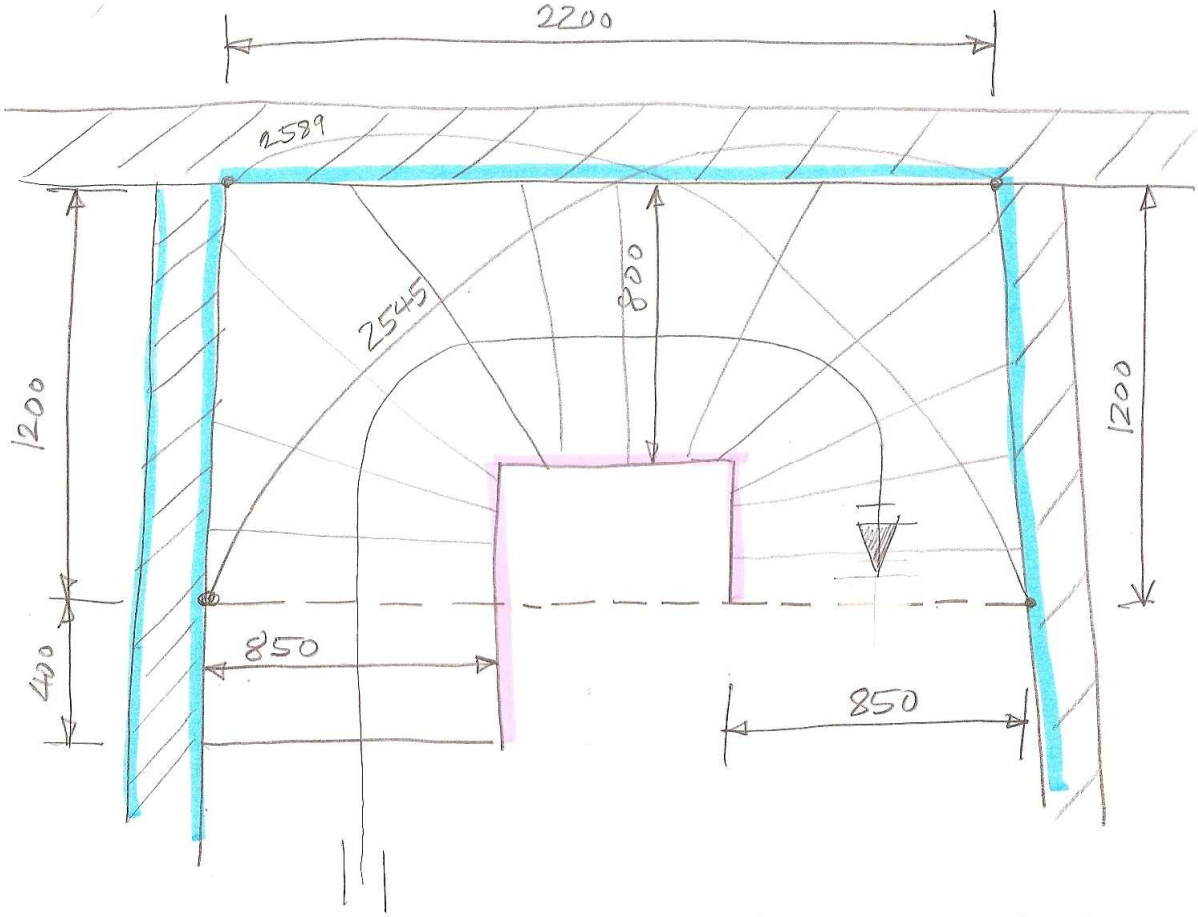
You can download the model from the download page or use the link below:

http://stairdesignsoftware.net/downloads/qturn%20winders%20closedstring.rar

Once downloaded decompress the file and open the SDS file in StairDesigner.
Here's the stair drawing in StairDesigner:



I want to adapt the stairs to another stair well, here's the sketch of the new stair well:



I want to change the stair from a quart turn to a half turn stair.

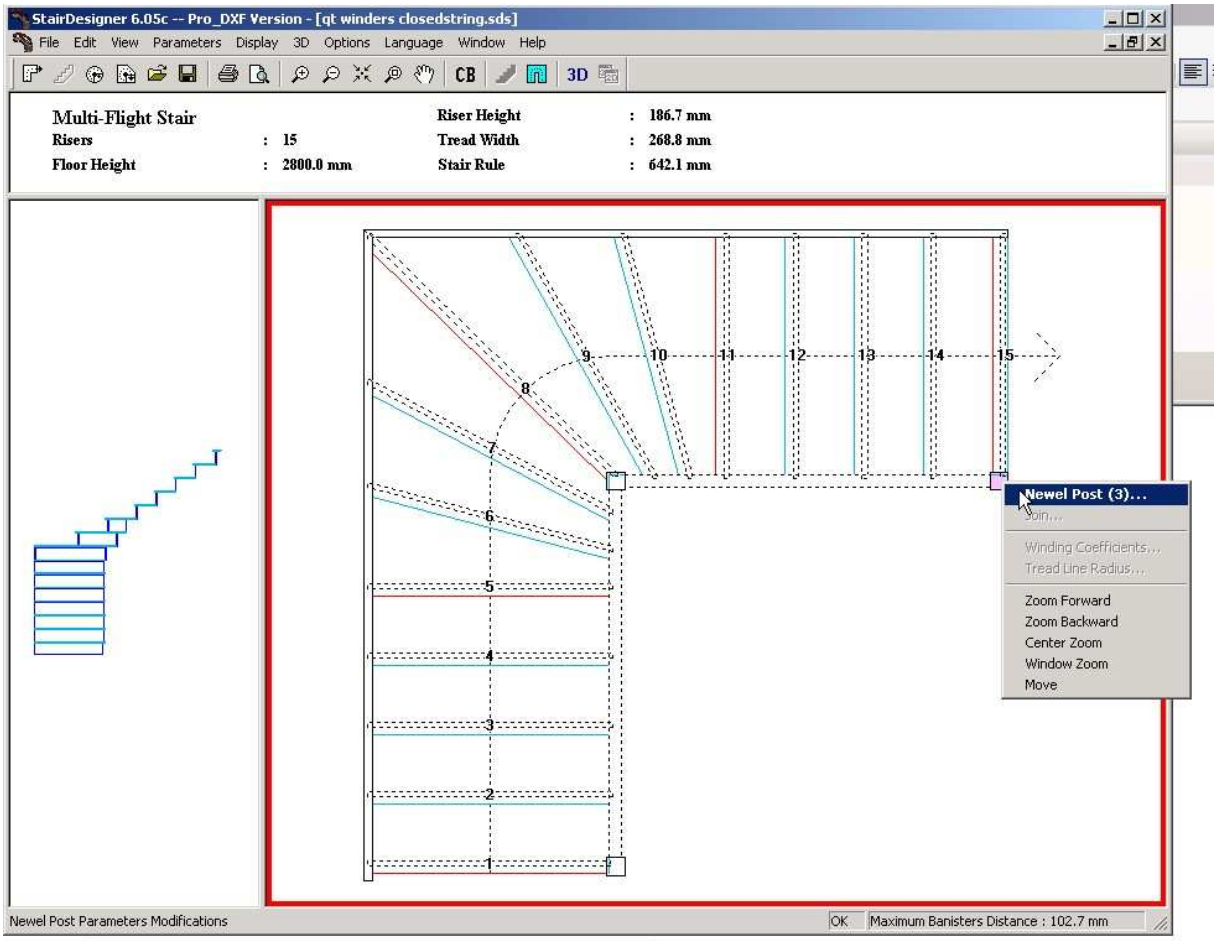
I want to change the stair height from 2800mm to 2750mm.

The stair well walls are not right angled and the angles have been measured by taking diagonal dimensions across the stair well (2545 and 2589).
To simplify the assembly I want to keep the inner string and newels at 90° and adjust the outer strings to fit the walls.

Changing the stair well dimensions

StairDesigner stores the newel post offset parameters with each newel post.
As the newels posts are erased when a stair is redesigned, to keep the same newel post offset parameters, it's a good idea to note these down before changing the stair well dimensions.

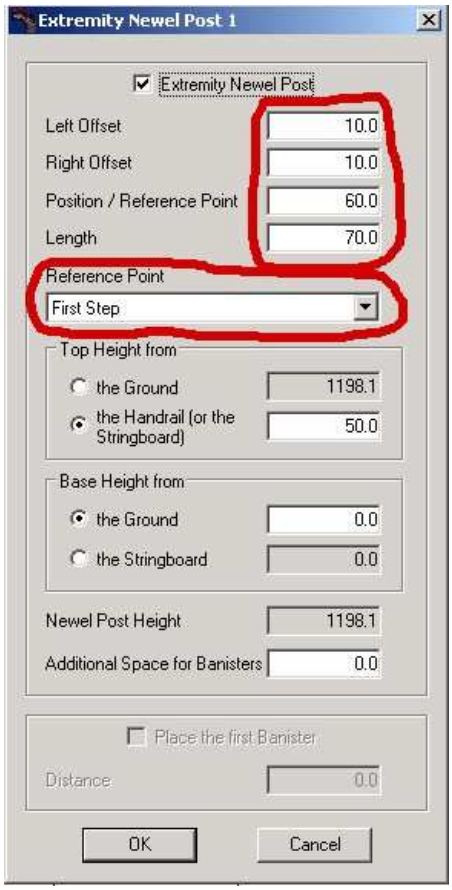
Right click on a newel post to open the newel post menu :



Choose NEWEL POST in the menu and StairDesigner will display the NEWEL POST PARAMETERS for the selected post.

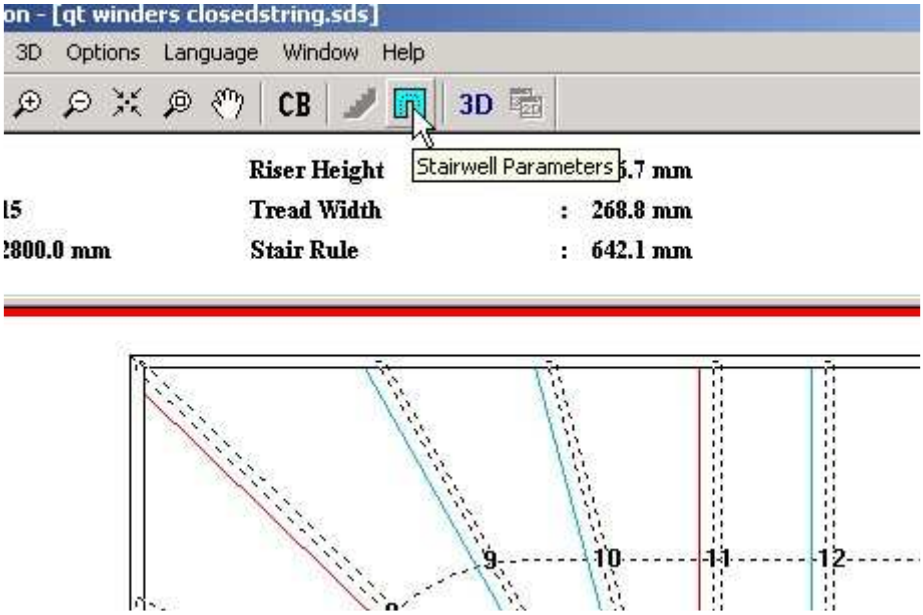
Write down the newel post offset parameters and reference point for future reference.

Repeat for each newel post.

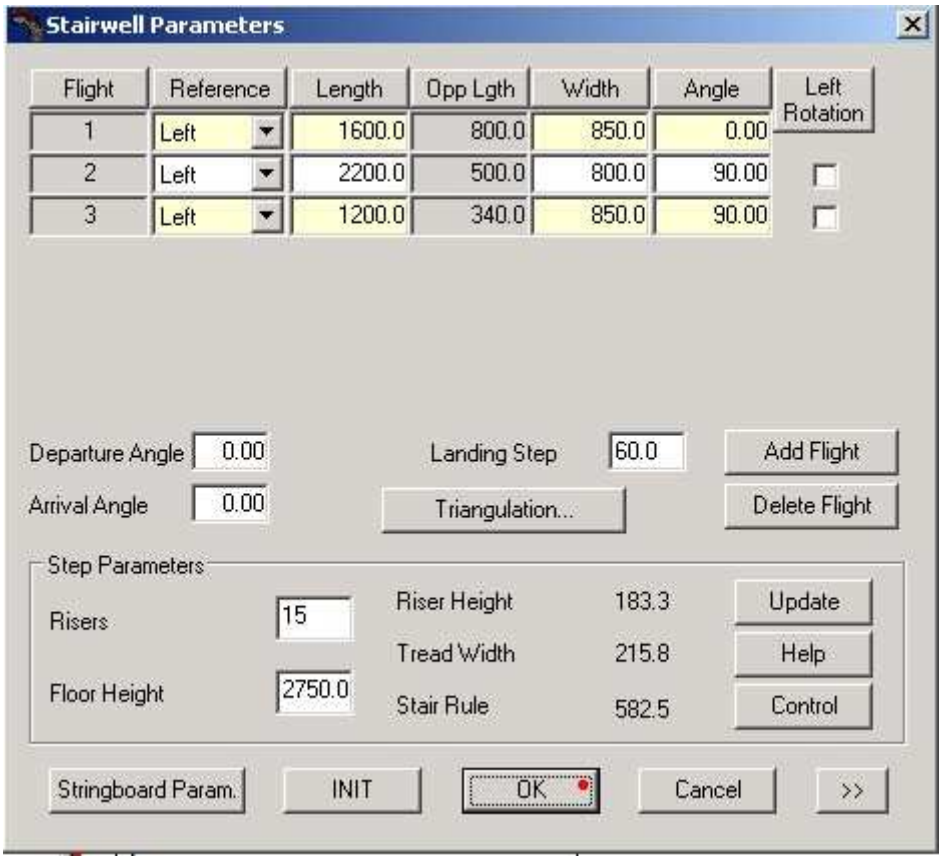


Changing the stair well parameters

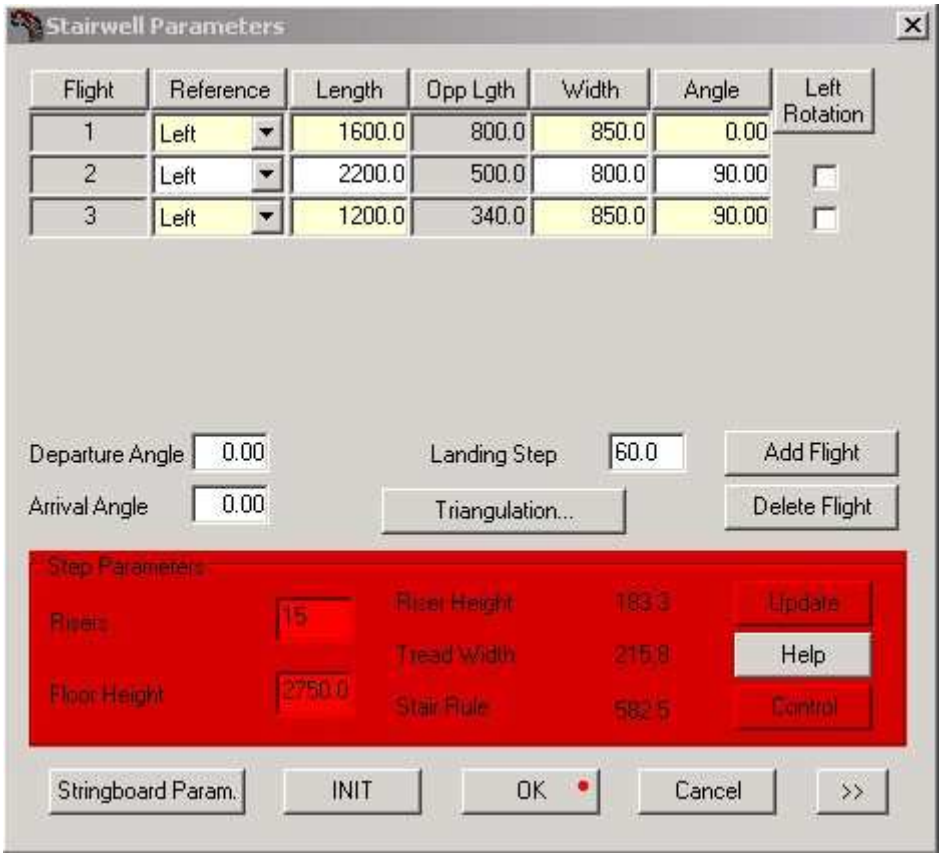
To start we will change the stair design to fit a right angled stair well.
To do this in StairDesigner open the STAIR WELL PARAMETERS dialog box by clicking the Stair Well Parameters button:



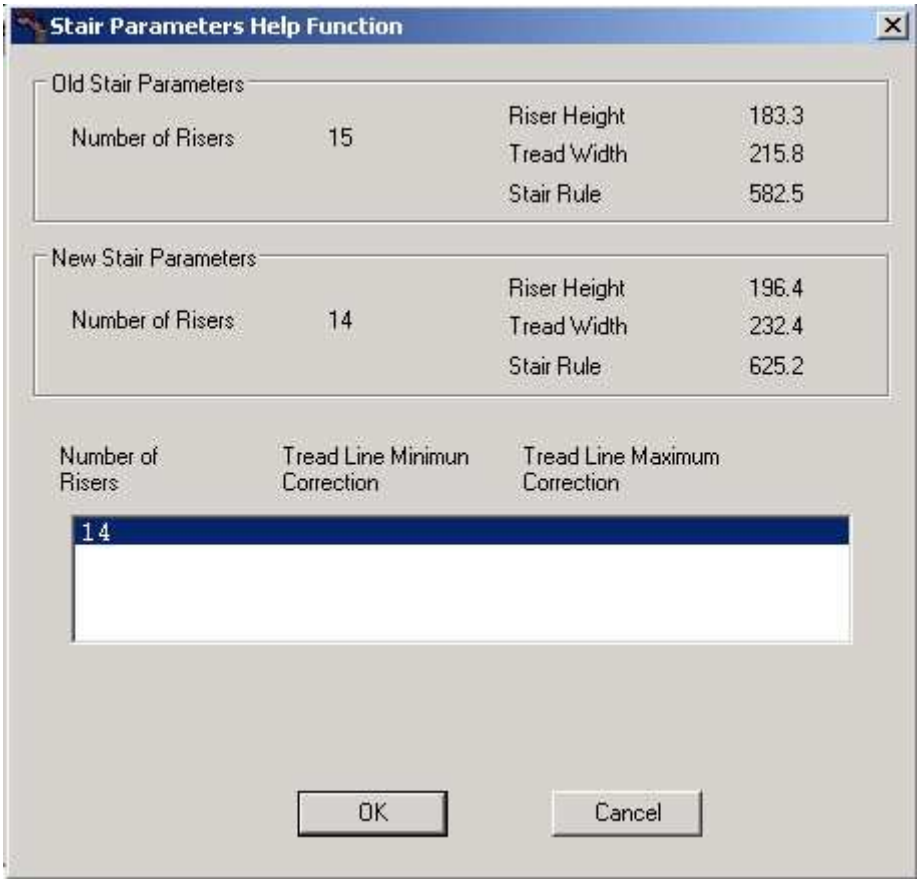
In the STAIR WELL PARMETERS dialog box change the Flight 1 and Flight 2 Length and Width. Click on the ADD FLIGHT button to add a Flight 3 and insert the Length and Width.
Your screen should look like this:



Note that the stair no longer complies with the STAIR RULE:
2R+H=>600<640 and the OK button is red.
Let's use StairDesigner to optimize the stairs.
Click the HELP button:



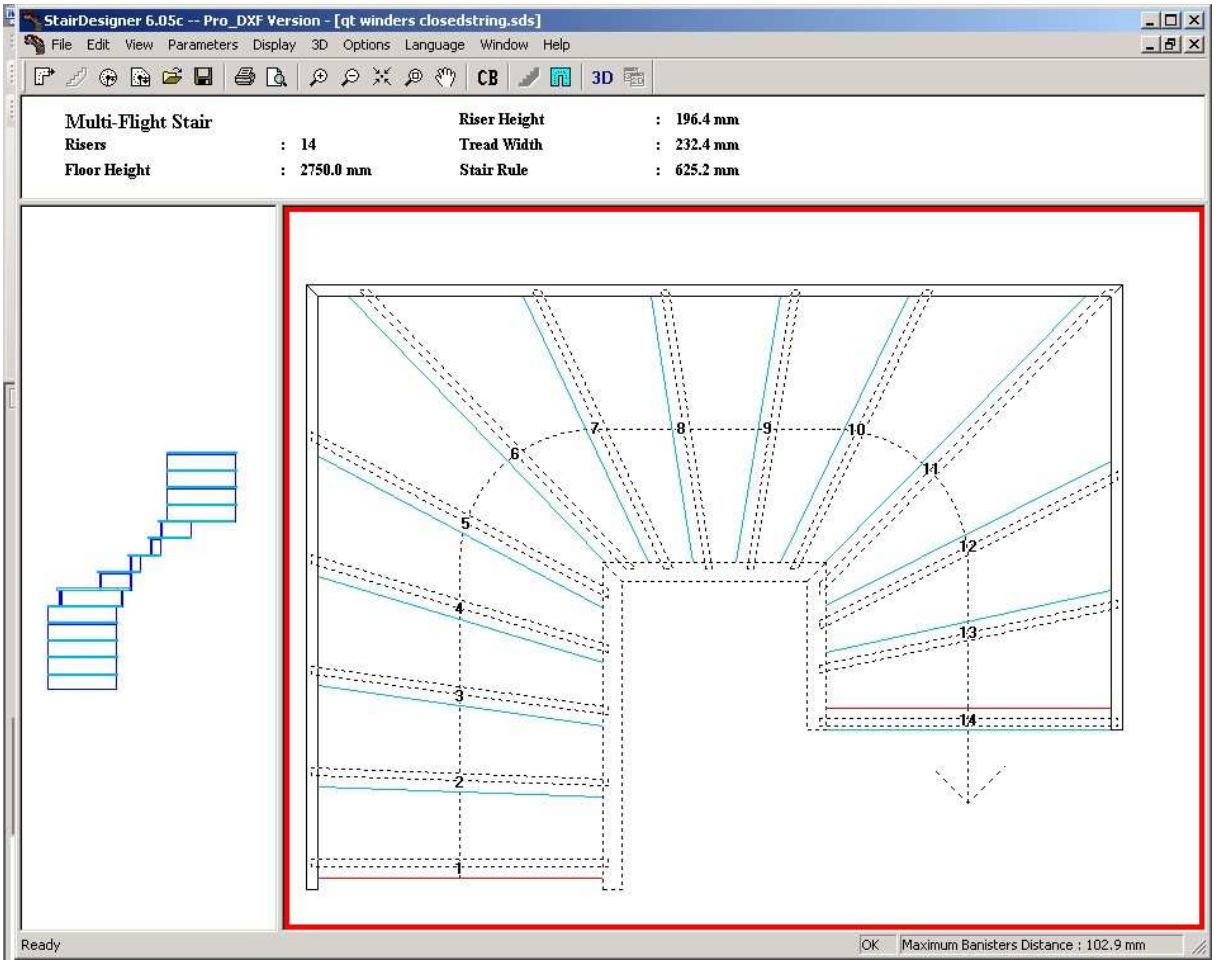
You should see this screen:



StairDesigner proposes changing the 15 rises to 14.

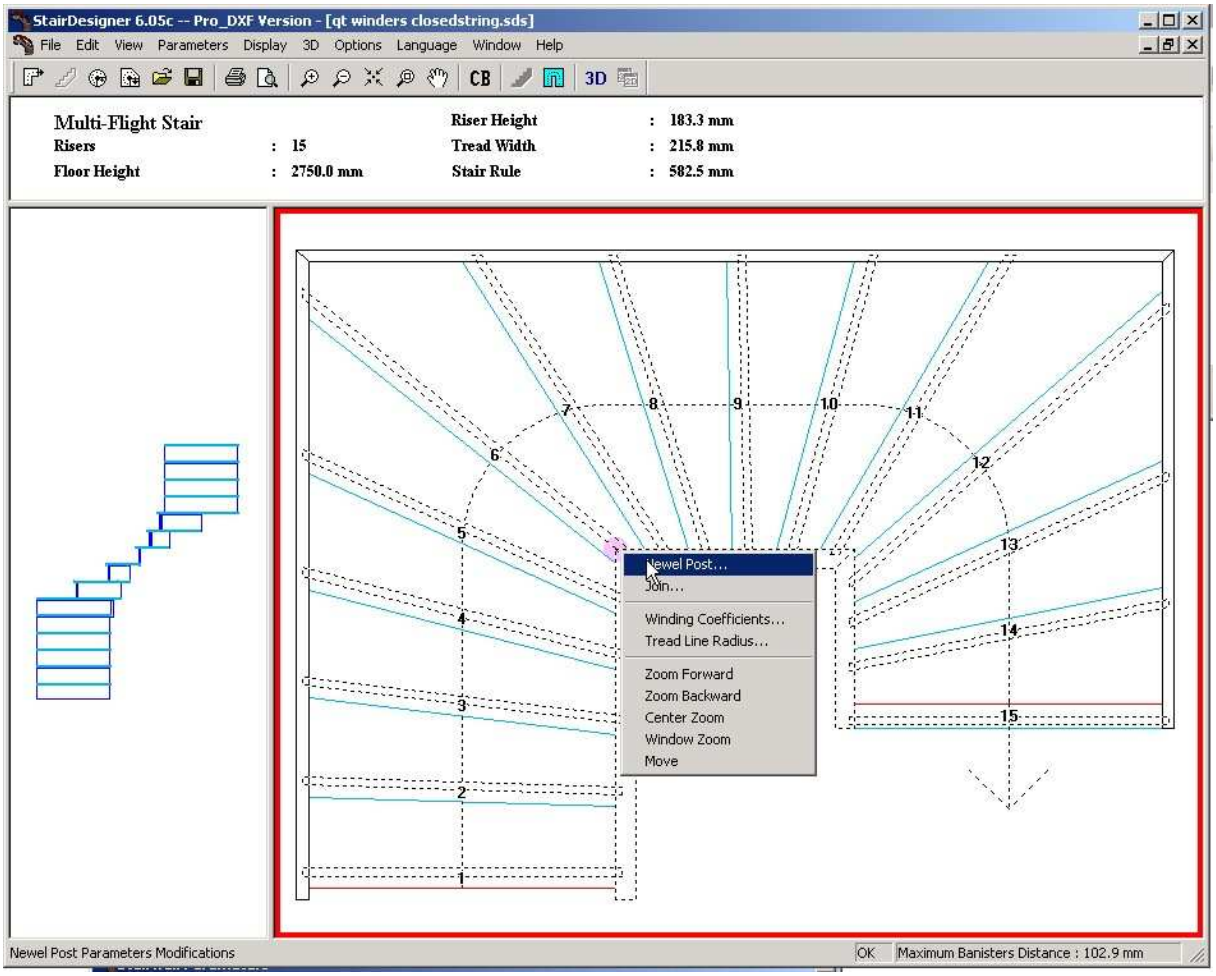
Click OK and the STAIR WELL PARAMETERS dialog box will display with the new stair parameters and the OK button green.

In the STAIR WELL PARAMETERS box Click “OK” and StairDesigner will draw the stairs with their new dimensions:



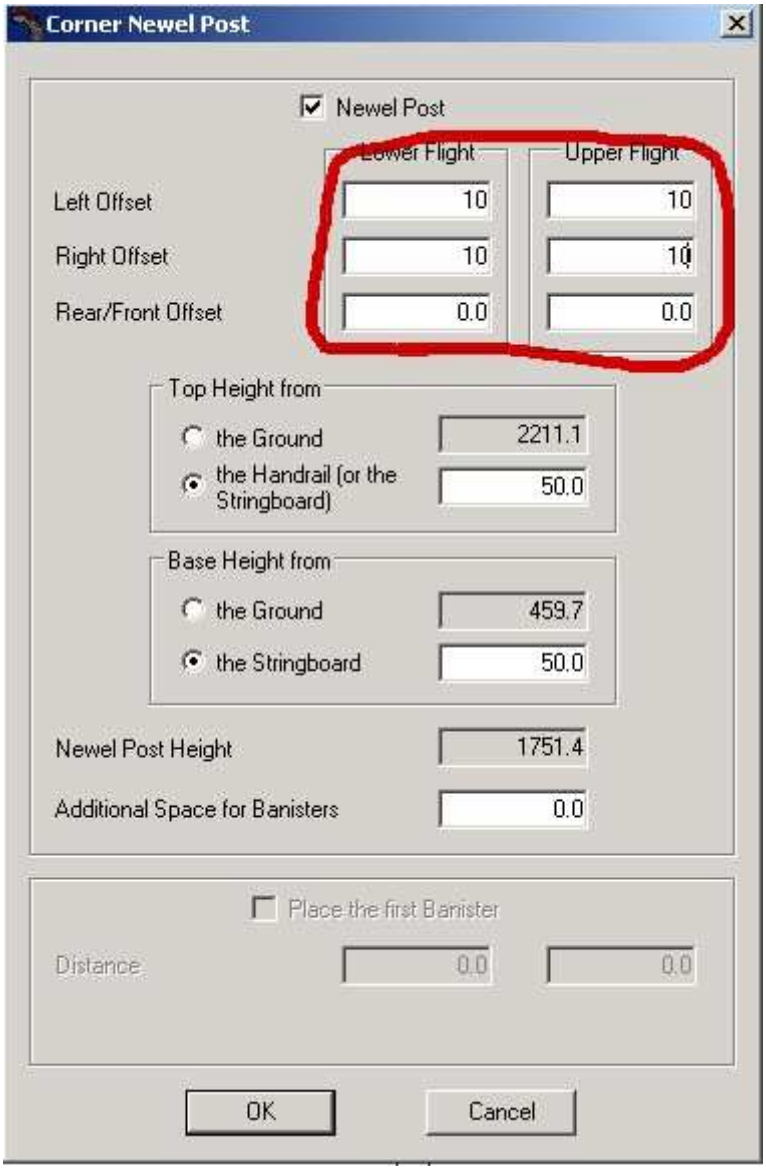
We will now insert the newel posts:

Place the mouse over the position of the newel post on the inside of the string and click right:

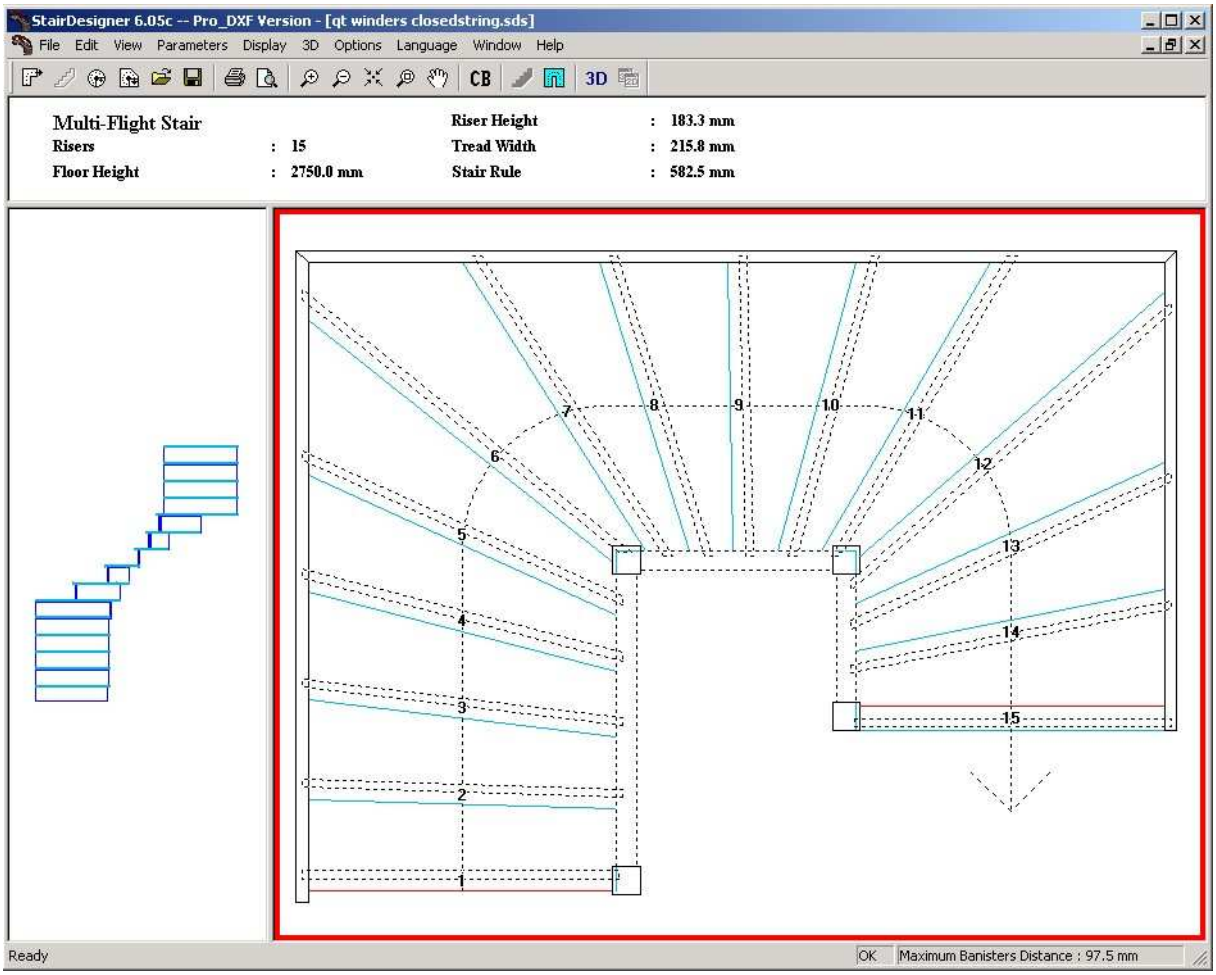


In the NEWEL POST PARAMETERS dialog box change the parameters to the original values that you have noted down earlier on.

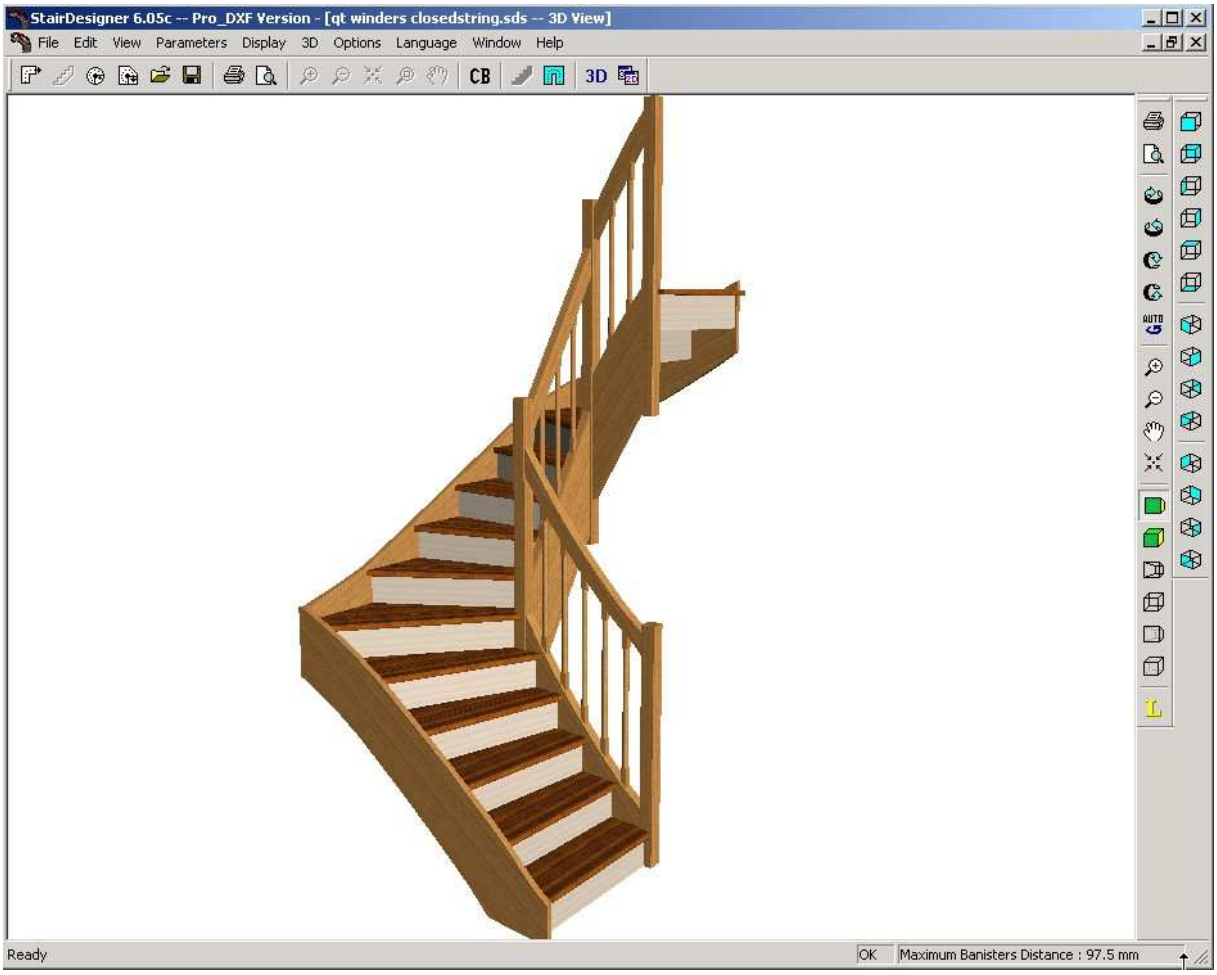
Here are the intermediary newel post parameters:



Once you have inserted all the newel posts your stair is redesigned to fit another stair well. It should look like this:


StairDesigner 6.05c -- Pro_DXF Version - [qt winders closedstring.sds]
File Edit View Parameters Display 3D Options Language Window Help
CB
3D
Multi-Flight Stair
Risers : 15
Floor Height : 2750.0 mm
Riser Height : 183.3 mm
Tread Width : 215.8 mm
Stair Rule : 582.5 mm
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Ready
OK
Maximum Banisters Distance : 97.5 mm

And in 3D



In my next article I will be showing you how to use StairDesigner's TRIANGUALTION tool to adapt the outside strings to the non right angled outer stair well walls.