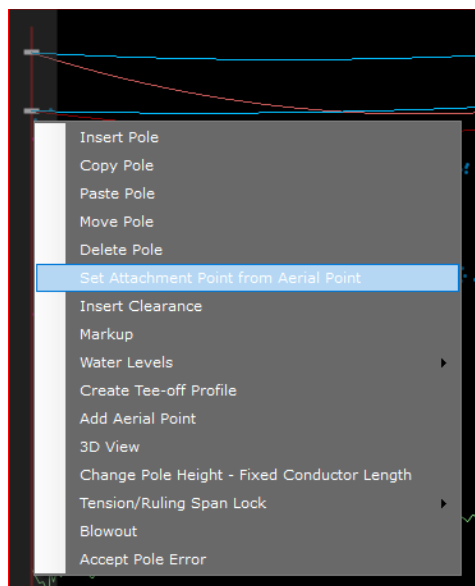# Fixing Attachment Points from LIDAR and Sagging Conductors

This walkthrough shows how to use the lidar data to set the wire heights at a pole. It is assumed that the lidar data has already been imported, and that default pole and circuits have been added to the job. This walkthrough used the file created in the walkthrough **Place Default Poles on a Lidar Based File**
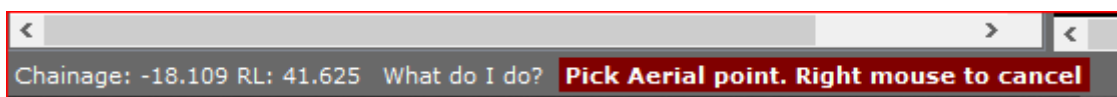
1. Open the file that you wish to use.
2. Go to the Profile view.
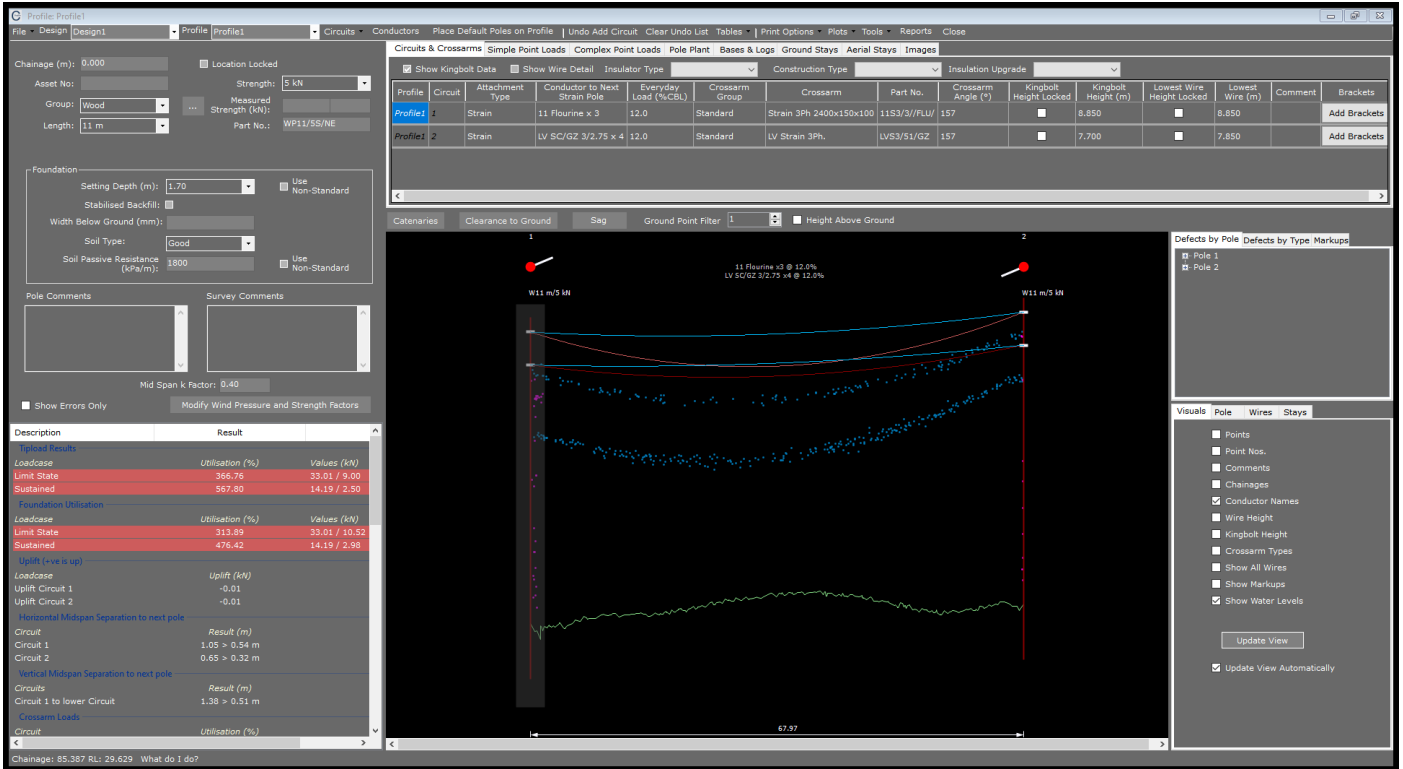


3. Right click the mouse close to the pole and a popup menu will be displayed as shown below.



4. Select the option **Set Attachment Point from Aerial Point.** Note that at the bottom of the screen there is an instruction telling you what you need to do next as shown below.

5.  In this example the blue points are wire shots and the purple points are shots to the structure. Structure shots could be pole, crossarm, stay wires or pole top plant such as transformers.  You should zoom in to get clear separation between aerial points.
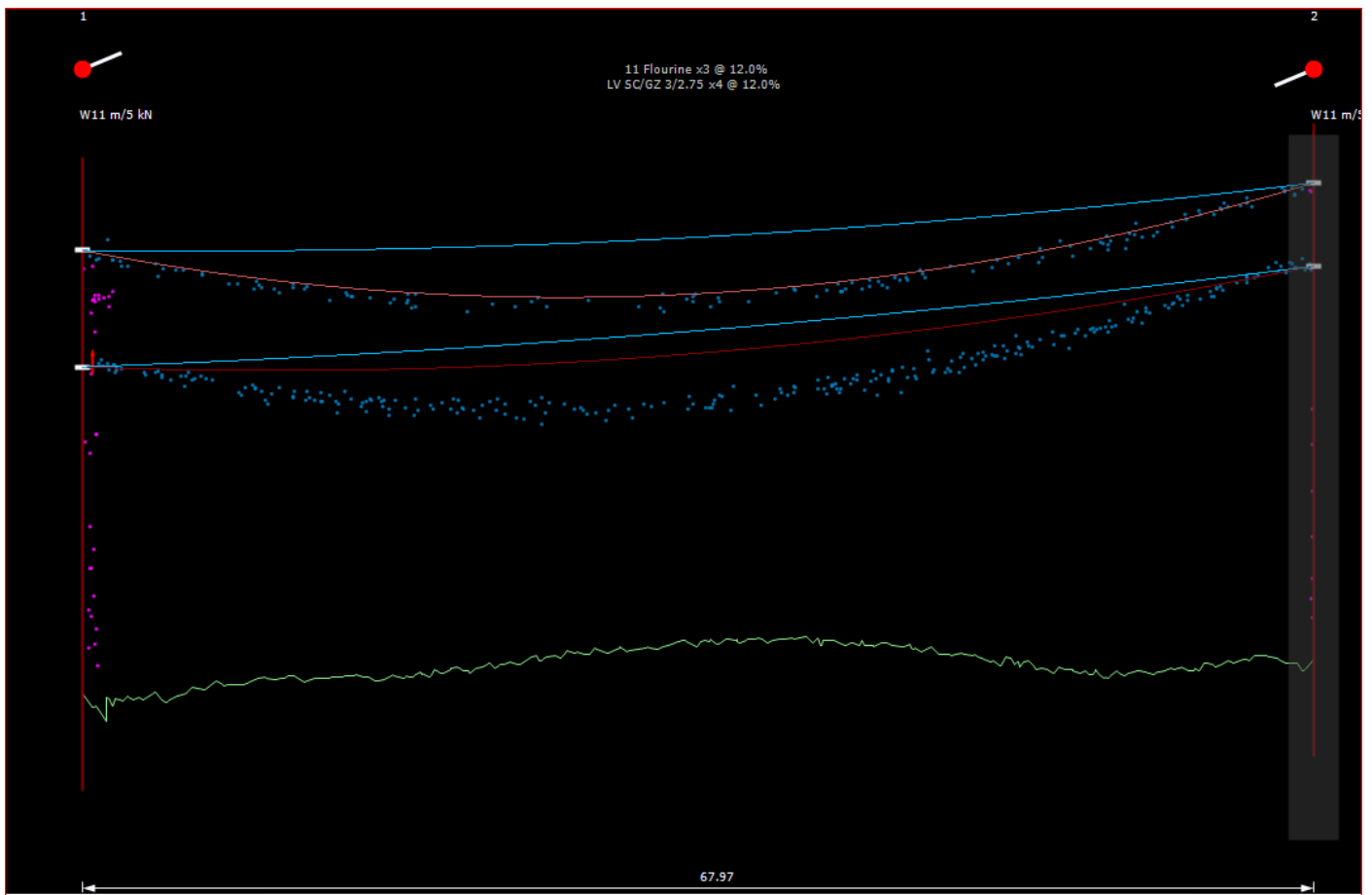    Select a point and a new screen will be displayed as shown below.



You must

- Select a point that is to be the attachment point. You can sort the points by any of the columns in the **Select Point** grid.
- Select which circuit you are modelling.
- Select whether the point is a wire shot or kingbolt height. For lidar data this would normally be the wire.
- Select the Crossarm, if there is more than one crossarm for that circuit.

6.  Press **Set Height**
7.  Do the same for the top circuit at the end pole of the span, and for the lower circuit. When modelling the lower circuit, don't forget to select Circuit 2 in the Select Circuit Grid.

8. If all done correctly, the Profile view should look similar to the image below.



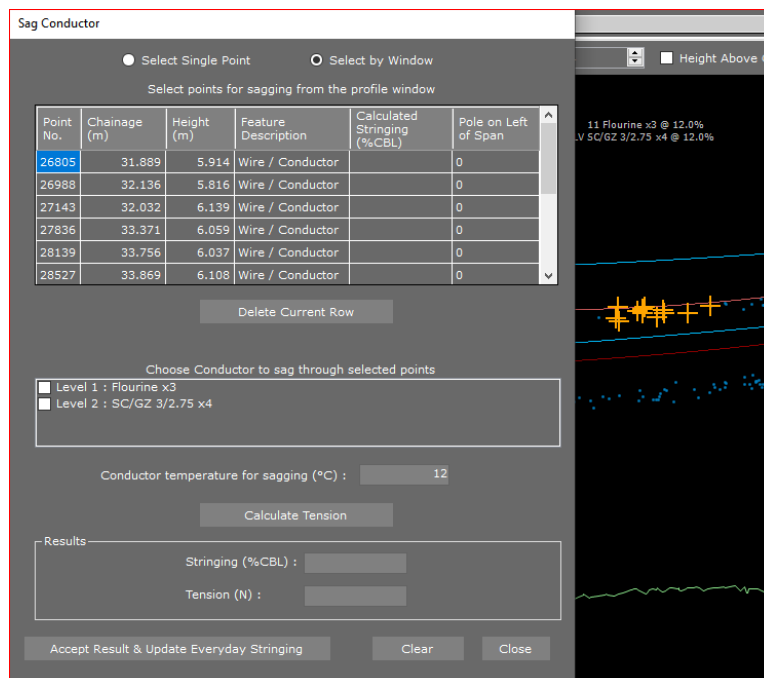9. The next step is to model the conductors correctly. Select **Sag** as shown below.

10. The sag from will be displayed. Click and hold the Title Bar on this form to move it to a better location if required. You can select points either singly or by window. Since in this case we have lidar data, we will select points by window.



11. Once you have chosen the selection mode, move the mouse to the Profile view and select the points



The points will be highlighted in the Profile view and added to the table on the Sag form.

12. Select which conductor you are doing the calculation for. In this case it is the top circuit, Level 1.

13. You must enter a temperature that you want the calculation made at. In the absence of accurate data, we recommend ambient plus a few degrees. Press **Calculate Tension** when ready.



14. The results will then be shown.

15. Press the button **Accept Result & Update Everyday Stringing**
16. Repeat the process for the lower circuit. The Profile view will now look similar to the image below.
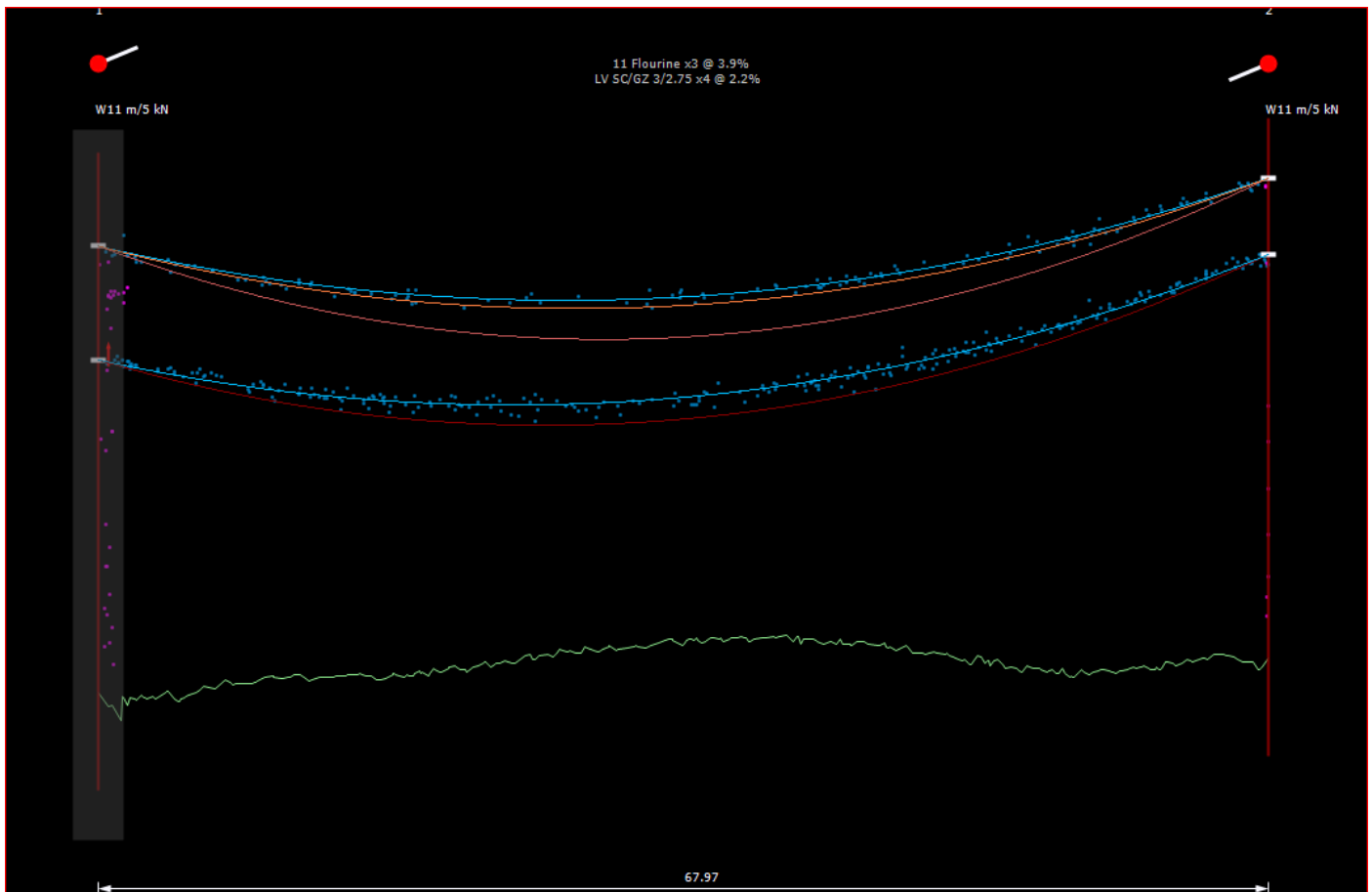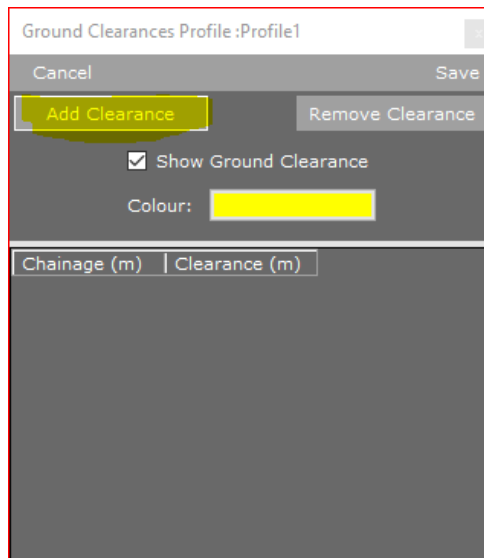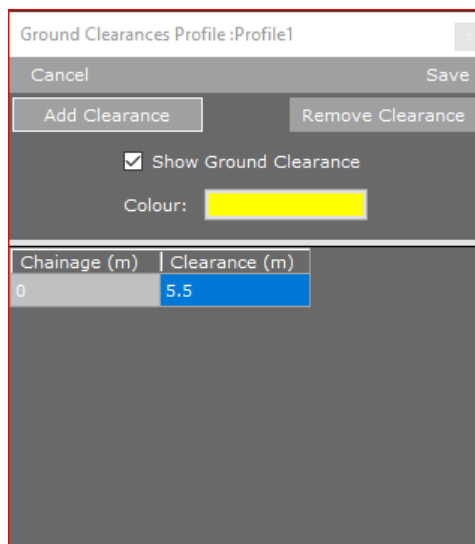
17. Show the Clearance line. Select **Clearance to Ground** as highlighted below.
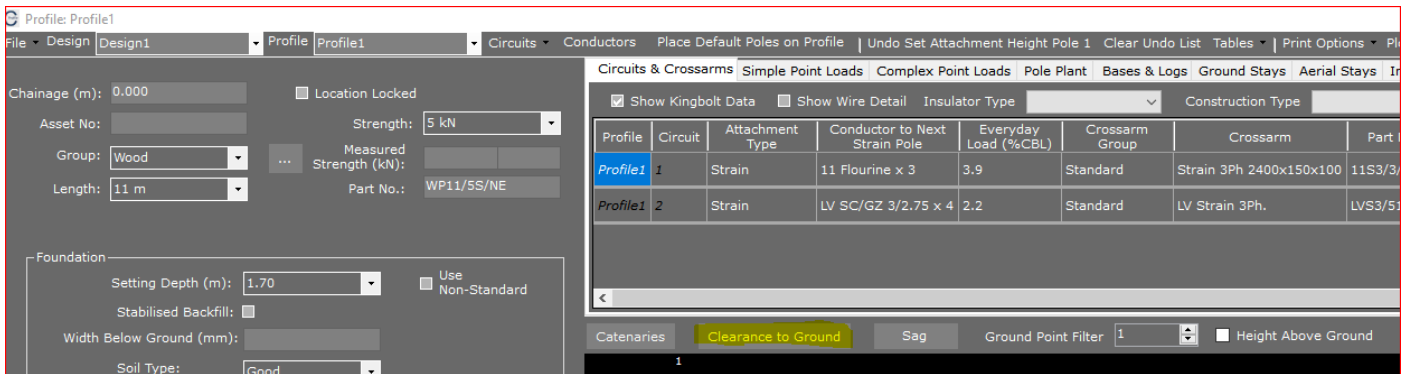


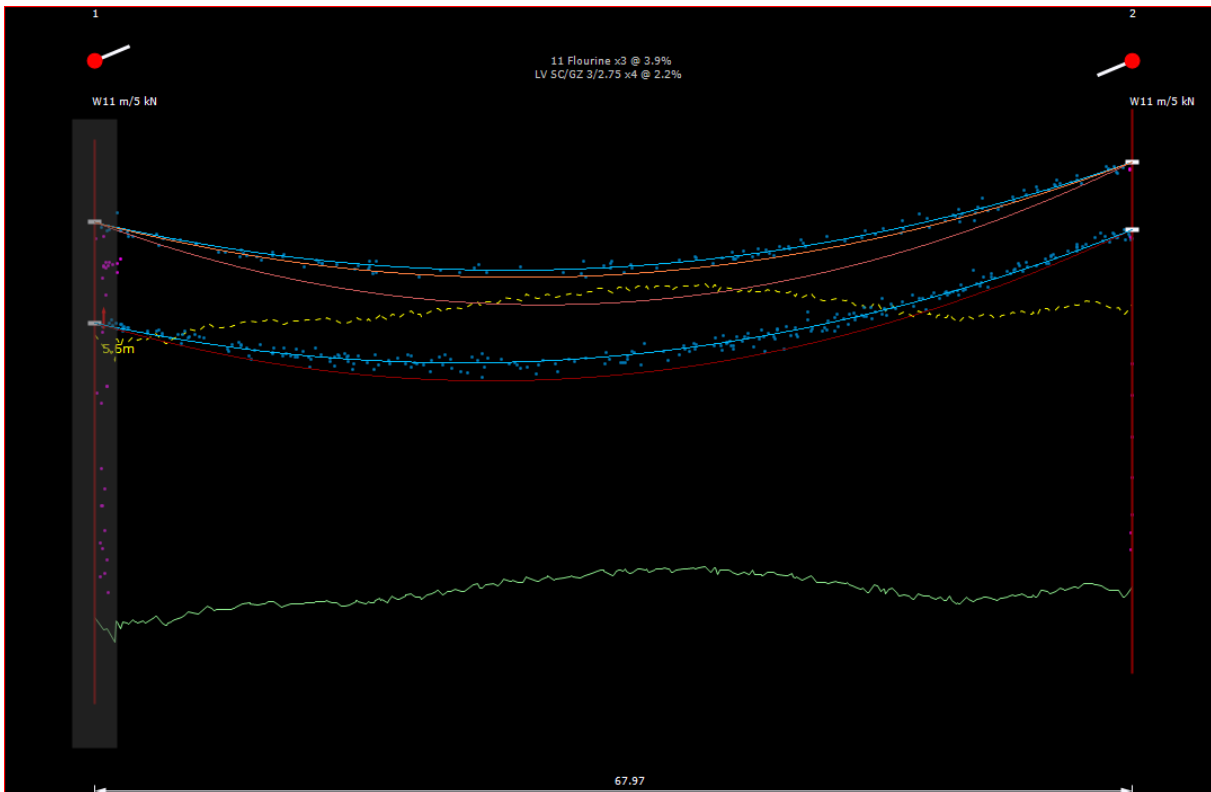18. The following form will be displayed and press **Add Clearance**.



19. Add the data shown below.

20. Press **Save** and you will be returned to the Profile view which should now look similar to the one below.



21. You can show the minimum clearance in the span by selecting **Catenaries.**

22. The form below will be displayed. Select the **Circuit 2** tab and then check the box **Show Minimum Clearance in Span** as shown below.
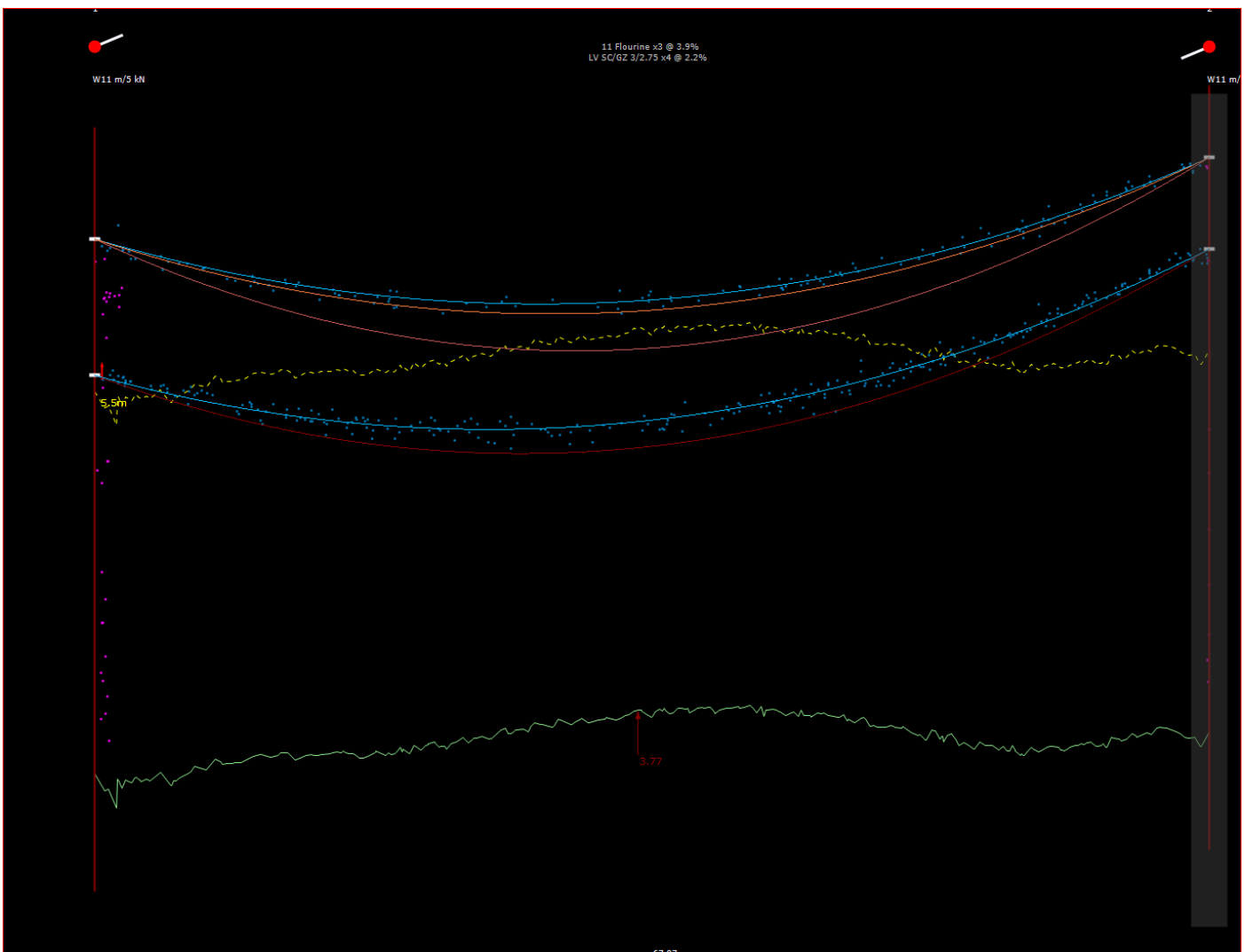


23. Close the form and the Profile view will now display the minimum clearance in the span.



Now that the existing model has been built, you can now proceed to make changes to fix any defects.