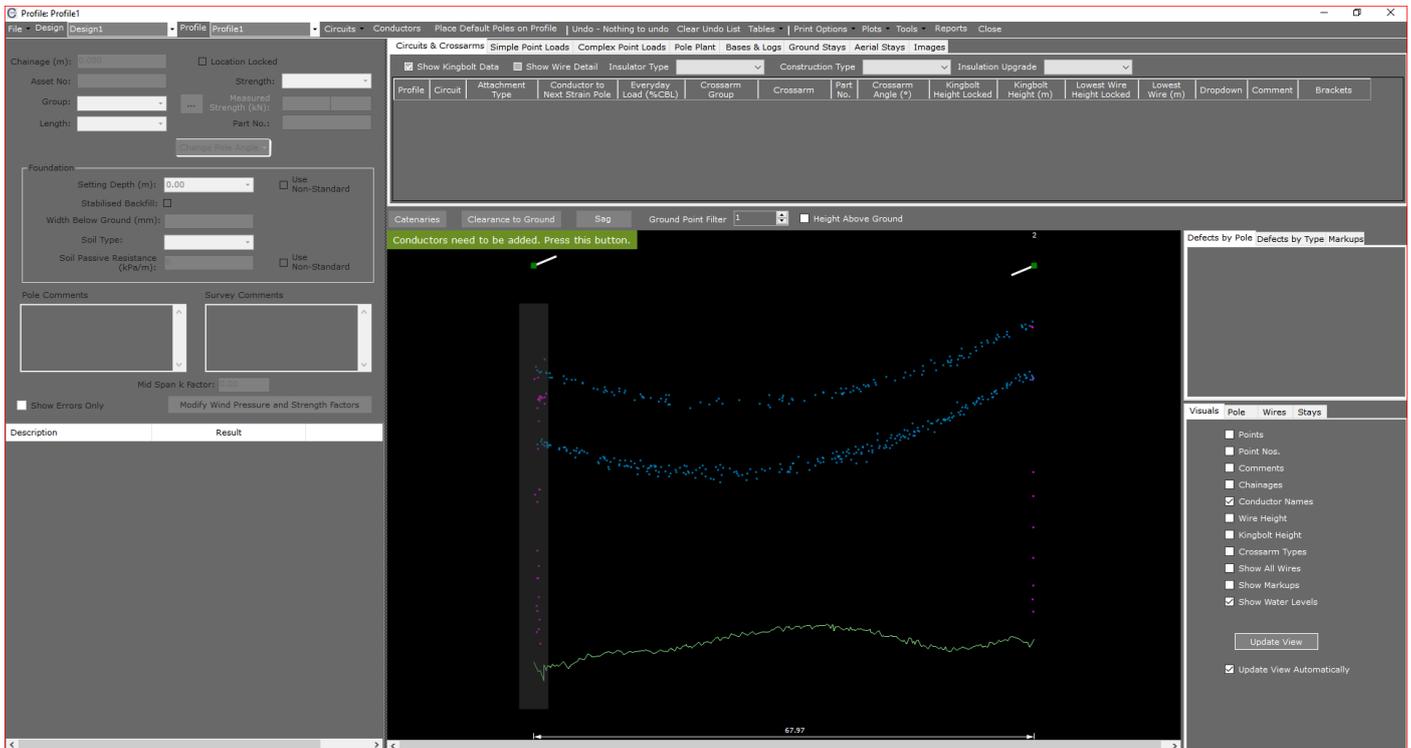


## Place Default Poles on a Lidar Based File

This walkthrough shows how to build a design on a profile created from Lidar Data. The walk through is also appropriate for any job where there are existing poles. The purpose of this tool is to provide a starting point for your design that you can then amend to suit the reality of your job.

It is assumed that the lidar data has already been imported, the digital terrain model formed, and a profile created.

1. Open the file you wish to use.
2. Go to the Profile view. You should see something similar to the screen below.

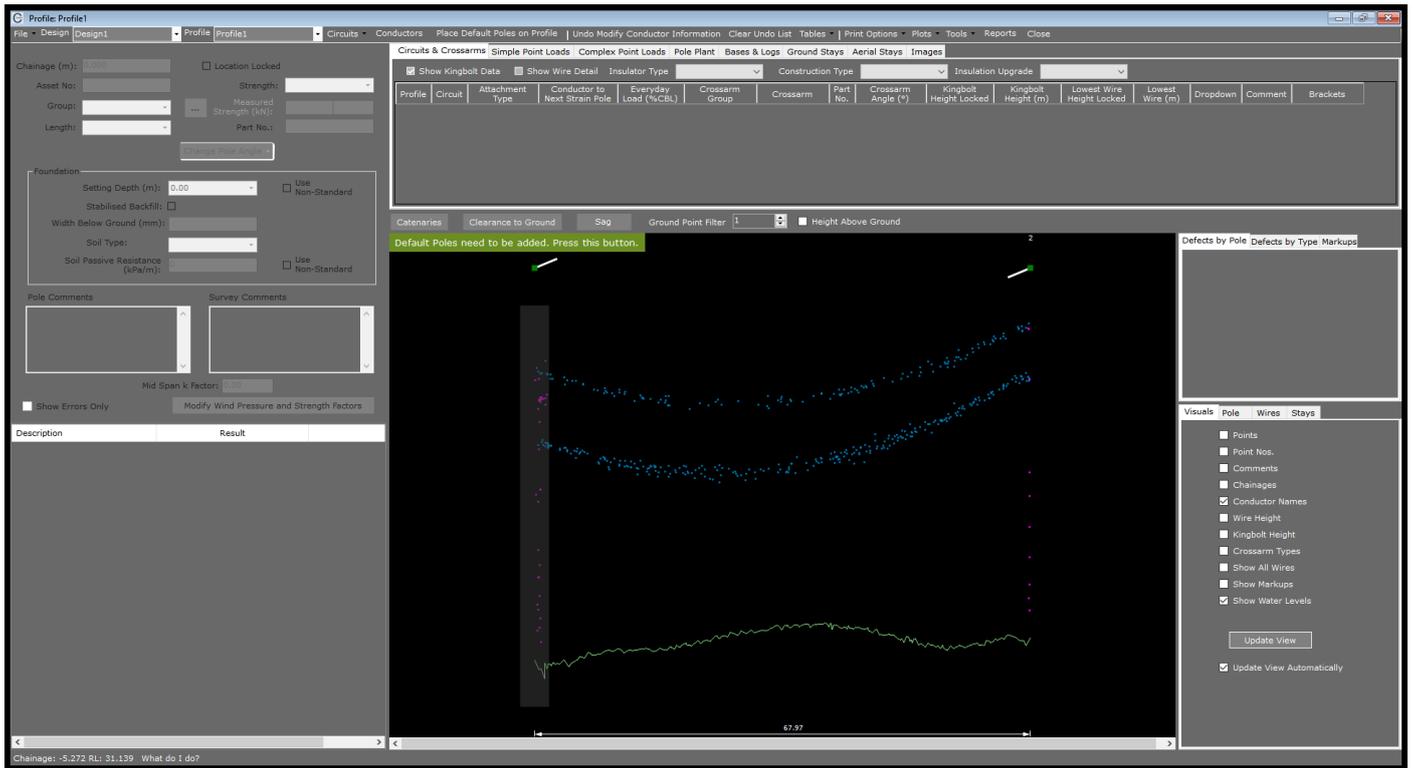


3. Press the button **Conductors need to be added. Press this button.**
4. A new form will be displayed. This form is used to add conductors to the current Profile. In this example we will add 2 conductors as it is clear from the lidar that there are 2 circuits in this span. Press **Save** once you have entered the data and you will be returned to the Profile view.

Conductor Properties								Cancel	Save
	Voltage	Conductor Group	Conductor	Everyday Load (%CBL)	No. of Wires	Max. Temperature (°C)	Min. Temperature (°C)	Comment	
	11	Standard	Flourine : AAAC 1120 7/3.00 Flourine	12	3	65	0		
	LV	Standard	SC/GZ 3/2.75 : SC/GZ 3/2.75	12	4	65	0		

# Place Default Poles on a Lidar Based File

The Profile view will now look similar to that below.



5. Press the button **Default Poles need to be added. Press this button.**

## Place Default Poles on a Lidar Based File

6. A new form will be displayed as shown below. Enter appropriate data and press **Place Poles**.

Place Default Poles on Profile: Profile1

Cancel Place Poles

Pole Group : Wood

Length Description : 11 m

Strength Description : 5 kN

Setting Depth (m) : 1.70

Stabilised Backfill :

Width Below Ground (mm) :

Soil Type : Good

Select Conductor	Conductor
<input checked="" type="checkbox"/>	11 Flourine @ 12% x3 wires
<input type="checkbox"/>	LV SC/GZ 3/2.75 @ 12% x4 wires

Strain Crossarms

Crossarm Group : Standard

Crossarm : Strain 3Ph 2400x150x100

Use Alternate Crossarm for centre phase switching

Alternate Crossarm to use :

Pin Crossarms

Crossarm Group : Standard

Crossarm : Delta Inter. 3Ph 2400x100x100

Use Alternate Crossarm for centre phase switching

Alternate Crossarm if switching centre phase :

Max. Deviation Angle for Pin crossarms (°) : 12

Process Field Codes (e.g. %PO, %YT, %YA etc)

Use same pole group for %PL & %PS code interpretation

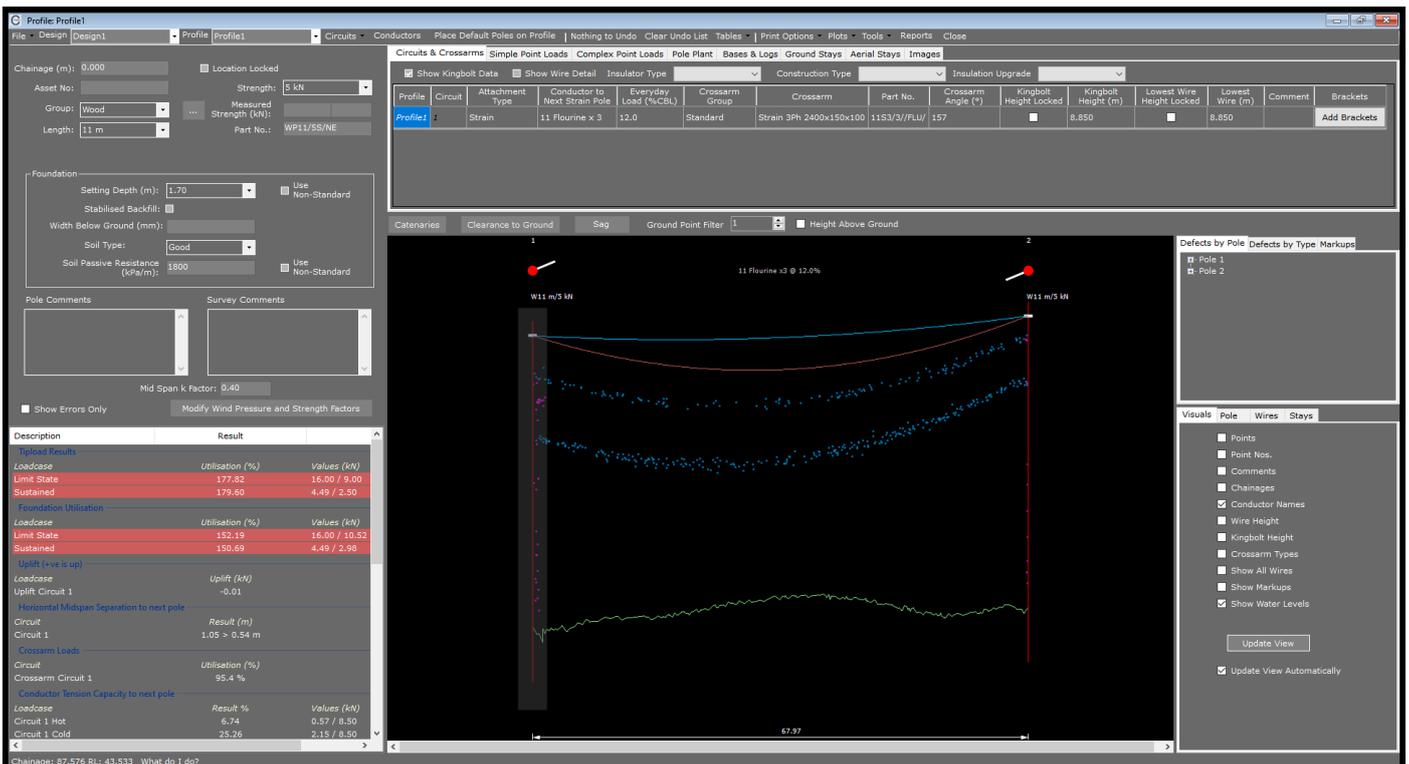
%YT & %YA codes are Kingbolt Heights

This is an existing profile  This is a new profile

Max. Span for placing poles on new profile (m) :

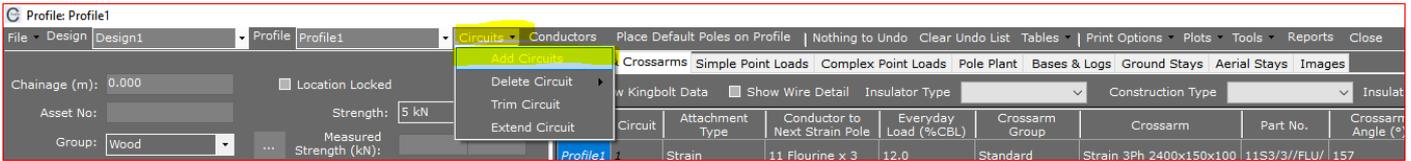
Place Poles

You will then be returned to the Profile view which will look similar to the image below.



## Place Default Poles on a Lidar Based File

- It is clear from the lidar that there are 2 circuits in this span. To add the information for the second circuit press the option shown below.



- A new form will be displayed. Make sure you select the items highlighted then press **Add Circuit**.

The 'Add Circuit' dialog box is shown with the following highlighted elements:

- Reference Circuit:** 1
- Is the new circuit above or below the Reference Circuit ?**
  - Add Circuit Below
  - Add Circuit Above
- Select Conductor:**

Select Conductor	Conductor
<input type="checkbox"/>	11 Flourine @12% x 3
<input checked="" type="checkbox"/>	LV SC/GZ 3/2.75 @12% x 4
- Are the distances between circuits measured between kingbolts or lowest wires ?**
  - Distances are Kingbolt to Kingbolt
  - Distances are Lowest wire to Lowest wire (POA's)
- Strain Crossarms:**
  - Distance from Reference Circuit (m) : 1
  - Crossarm Group: Standard
  - Crossarm: LV Strain 3Ph.
  - Use Alternate Crossarm for centre phase switching
  - Alternate Crossarm if switching centre phase: [Empty]
- Pin Crossarms:**
  - Distance from Reference Circuit (m) : 1
  - Crossarm Group: Standard
  - Crossarm: LV Pin 3Ph.
  - Use Alternate Crossarm for centre phase switching
  - Alternate Crossarm if switching centre phase: [Empty]
- Max. Deviation Angle for Pin crossarms (°) :** 12
- Start at Pole :** 1
- End at Pole :** 2
- Add Circuit** button

## Place Default Poles on a Lidar Based File

You will be returned to the Profile View which will now look something like the image below, depending on the conductors used.

The screenshot shows a software interface for pole placement and profile view. The interface is divided into several sections:

- Top Menu Bar:** File, Design, Profile, Circuits, Conductors, Place Default Poles on Profile, Undo Add Circuit, Clear Undo List, Tables, Print Options, Plots, Tools, Reports, Close.
- Left Sidebar:**
  - Chainage (m): 0.000, Location Locked
  - Asset No: [Field], Strength: 5 kN
  - Group: Wood, Measured Strength (kN): [Field]
  - Length: 11 m, Part No.: WP11/SS/NE
  - Foundation: Setting Depth (m): 1.70, Use Non-Standard, Stabilised Backfill: [Field], Width Below Ground (mm): [Field], Soil Type: Good, Soil Passive Resistance (kPa/m): 1800, Use Non-Standard
  - Pole Comments: [Field], Survey Comments: [Field]
  - Mid Span k Factor: 0.40
  - Show Errors Only, Modify Wind Pressure and Strength Factors
  - Typical Results table (see below)
  - Uplift (+ve is up) table (see below)
  - Horizontal Midspan Separation to next pole table (see below)
  - Vertical Midspan Separation to next pole table (see below)
  - Crossarm Loads table (see below)
- Central Profile View:**
  - Two poles labeled "W11 m/5 kN" are shown with sagging conductors between them.
  - Ground profile is shown at the bottom.
  - Clearance to Ground, Sag, Ground Point Filter, Height Above Ground options are visible.
- Right Sidebar:**
  - Defects by Pole Defects by Type Markups: Pole 1, Pole 2
  - Visuals: Pole, Wires, Stays
  - Update View, Update View Automatically
- Table: Circuits & Crossarms**

Profile	Circuit	Attachment Type	Conductor to Next Strain Pole	Everyday Load (%CBL)	Crossarm Group	Crossarm	Part No.	Crossarm Angle (°)	Kingbolt Height Locked	Kingbolt Height (m)	Lowest Wire Height Locked	Lowest Wire (m)	Comment	Brackets
Profile 1	Strain		11 Flourine x 3	12.0	Standard	Strain 3PH 2400x150x100	11S3/3/FLU	157		8.850		8.850		Add Brackets
Profile 2	Strain		LV SC/GZ 3/2.75 x 4	12.0	Standard	LV Strain 3PH	LV3/31/GZ	157		7.700		7.850		Add Brackets

Description	Result
<b>Typical Results</b>	
<b>Loadcase</b>	
Limit State	Utilisation (%) Values (kN)
Sustained	365.76 33.01 / 9.00
	597.69 14.19 / 2.99
<b>Foundation Utilisation</b>	
Limit State	Utilisation (%) Values (kN)
Sustained	313.89 33.01 / 10.52
	476.42 14.19 / 2.98
<b>Uplift (+ve is up)</b>	
Limit State	Uplift (kN)
Uplift Circuit 1	-0.01
Uplift Circuit 2	-0.01
<b>Horizontal Midspan Separation to next pole</b>	
Circuit	Result (m)
Circuit 1	1.05 > 0.54 m
Circuit 2	0.65 > 0.32 m
<b>Vertical Midspan Separation to next pole</b>	
Circuits	Result (m)
Circuit 1 to lower Circuit	1.38 > 0.91 m
<b>Crossarm Loads</b>	
Circuit	Utilisation (%)

The user can now proceed to modify the data to model the existing line.