



Spiral survey guide

v.2 5/10/05

It is often not possible for us to plot out curved sections of stairs accurately from tread depth measurements alone. The alternative method of surveying stairs with a curved section(s) is to complete a spiral survey. We recommend that a spiral survey is ideally a 2 man job.

Please expect attached with this sheet:

Empty spiral staircase survey measurements table

Diagram sheets (5 pages)

Before starting to measure a spiral staircase, ensure you have the following:

5m+ steel tape measure

1m steel rule

Combination squares (with built in spirit levels)

Protractor/Angle finder

4' spirit level

Line (String) level

Masking tape, thumb tacks

String (30m)

Two plumb bobs

Useful:

Digital camera

Laser distance meter

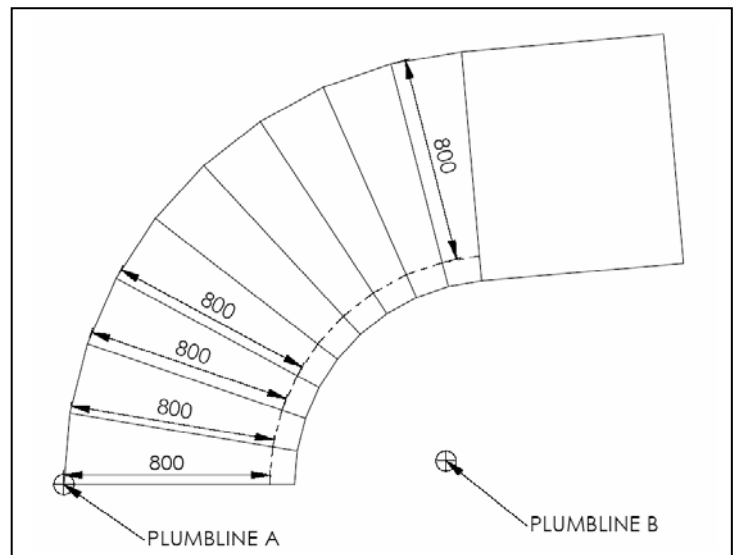
Step 1: Fixing plumb lines

NOTE that all measurements from the plumb lines should be taken horizontally.

Both plumb lines should be fixed such that they are within line of sight of the whole stair. If this is not possible then please supply us with a rough sketch so that we can provide more appropriate instructions.

If possible fix plumb line A at the corner of a tread at the external wall - ideally the 1st.

Note that *it is* possible to mount this plumb line at another location but the corner of a tread will always be preferable as there will then be a datum point that is actually on the model.



Plumb line B should be fixed at least 1.5m/60" away from plumb line A – preferably away the stair. Measure the distance between A & B.

Step 2. Marking off

Mark off a fixed distance (measured from the trackside wall) on the nose of each riser with masking tape. We would suggest 800mm as shown.

Step 3: NET treads and riser heights

Measure the tread depth (from nose to nose) at the trackside wall and marked off point on each step. Refer to **diagrams 1 & 2**.

Step 4: Plumb line survey

Survey the distances from Plumb line A & B of each riser corner as shown in the attached diagrams.

If there are straight sections of stair then please include at least one riser either side of the curved section in the plumb line survey. The straight sections should be surveyed in the normal fashion (Pitch, goings, rise.)

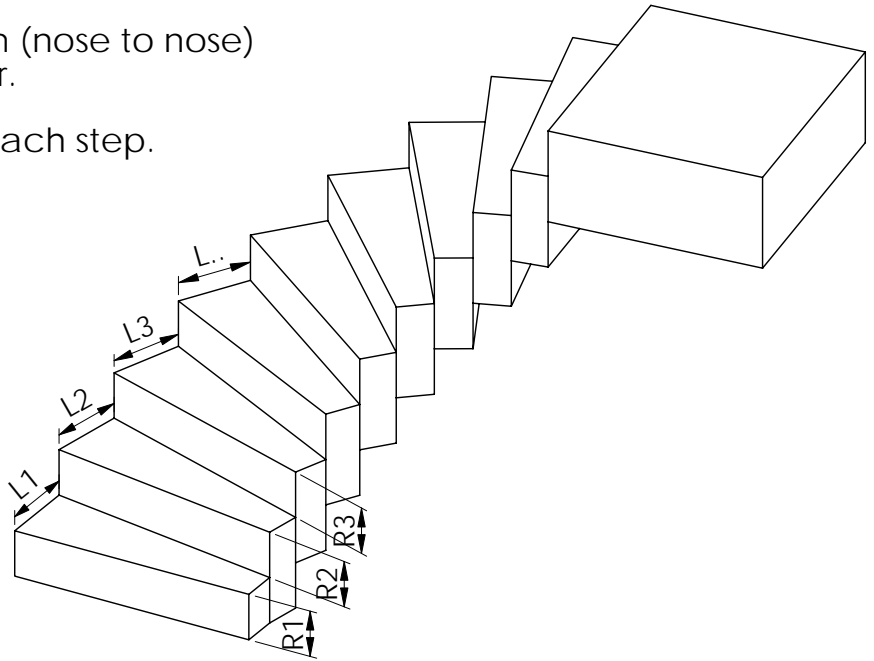
Step 5: Further details

Once the spiral portion of the stairs has been completed please provide a sketch and any relevant details on the stair that may affect the placing or use of the RTC track – see final page of sketches.

DIAGRAM 1

Measure the tread depths from (nose to nose) at the left hand side of the stair.

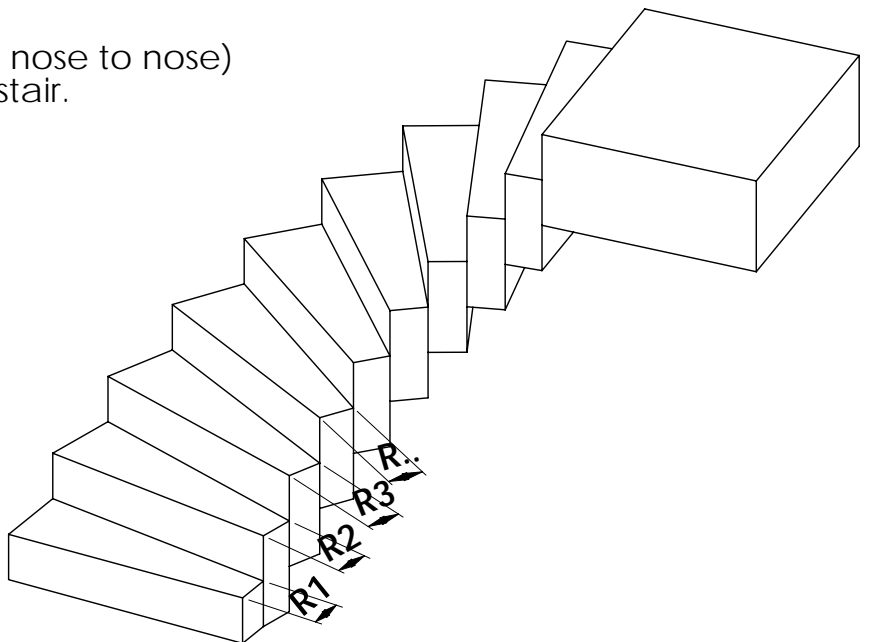
Also measure the total rise of each step.



Riser #	Height Diagram 1	NET tread depths		Plumbline A			Plumbline B		
		Left Diagram 1	Right Diagram 2	Left Diagram 3	@fixed distance Diagram 4	Right Diagram 5	Left Diagram 6	@fixed distance Diagram 7	Right Diagram 8
1	R1	L1							
2	R2	L2							
3	R3	L3							
...	R..	L..							

DIAGRAM 2

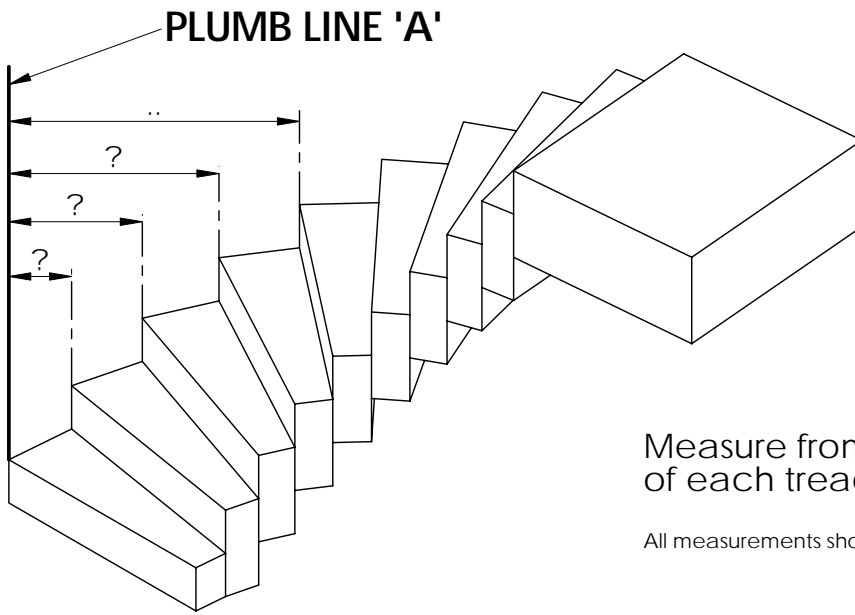
Measure the tread depths (from nose to nose) at the far right hand side of the stair.



Riser #	Height Diagram 1	NET tread depths		Plumbline A			Plumbline B		
		Left Diagram 1	Right Diagram 2	Left Diagram 3	@fixed distance Diagram 4	Right Diagram 5	Left Diagram 6	@fixed distance Diagram 7	Right Diagram 8
1			R1						
2			R2						
3			R3						
..			R..						



DIAGRAM 3

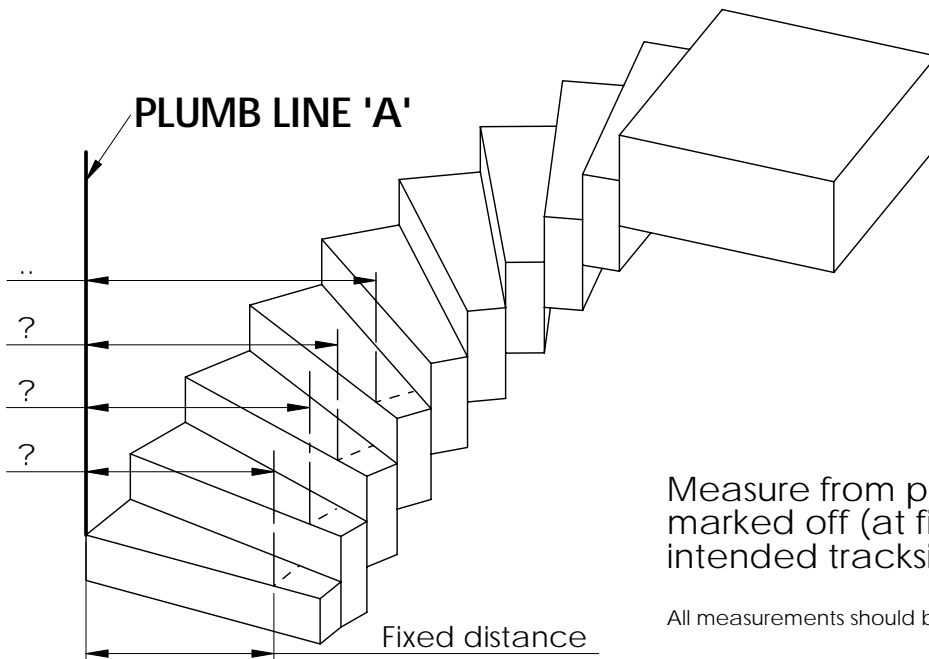


Measure from plumb line 'A' to the corner of each tread nose on the left side of stairs

All measurements should be taken horizontally from the plumb line.

Riser #	Height Diagram 1	NET tread depths		Plumbline A			Plumbline B		
		Left Diagram 1	Right Diagram 2	Left Diagram 3	@fixed distance Diagram 4	Right Diagram 5	Left Diagram 6	@fixed distance Diagram 7	Right Diagram 8
1				?					
2				?					
3				?					

DIAGRAM 4



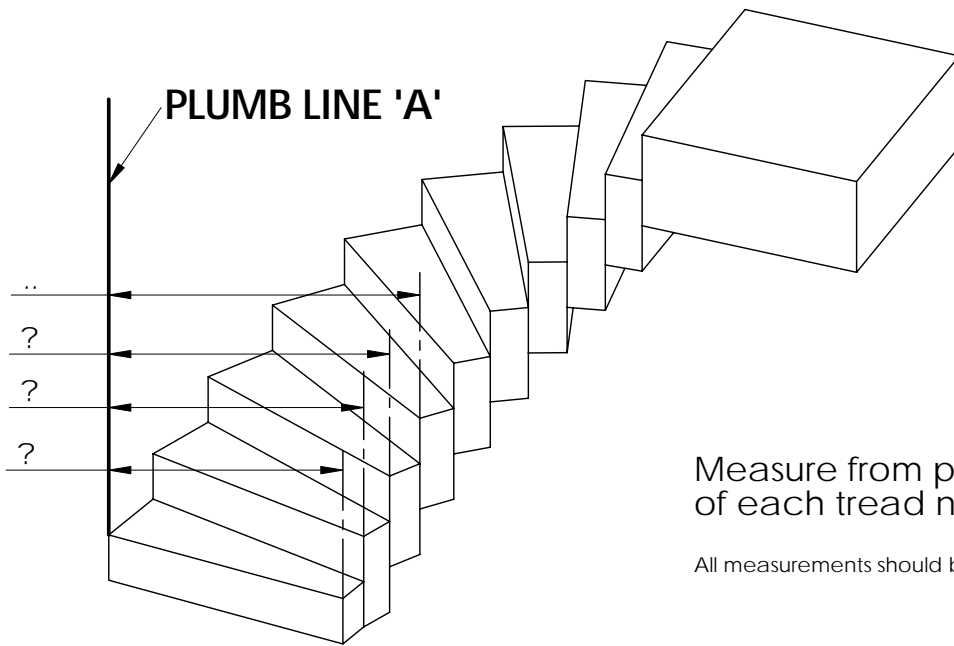
Measure from plumb line 'A' to the point marked off (at fixed distance from the intended trackside wall)

All measurements should be taken horizontally from the plumb line.

Riser #	Height Diagram 1	NET tread depths		Plumbline A			Plumbline B		
		Left Diagram 1	Right Diagram 2	Left Diagram 3	@fixed distance Diagram 4	Right Diagram 5	Left Diagram 6	@fixed distance Diagram 7	Right Diagram 8
1					??				
2					??				
3					??				
..					...				



DIAGRAM 5

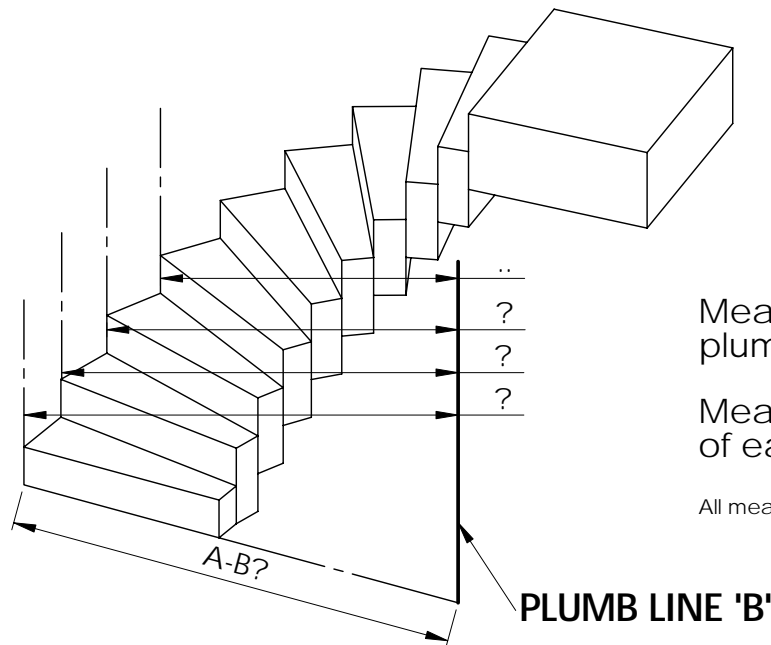


Measure from plumb line 'A' to the corner of each tread nose on the right side of stairs

All measurements should be taken horizontally from the plumb line.

Riser #	Height Diagram 1	NET tread depths		Plumbline A			Plumbline B		
		Left Diagram 1	Right Diagram 2	Left Diagram 3	@fixed distance Diagram 4	Right Diagram 5	Left Diagram 6	@fixed distance Diagram 7	Right Diagram 8
1						??			
2						??			
3						??			
..						...			

DIAGRAM 6



Measure the horizontal distance between plumb lines A and B.

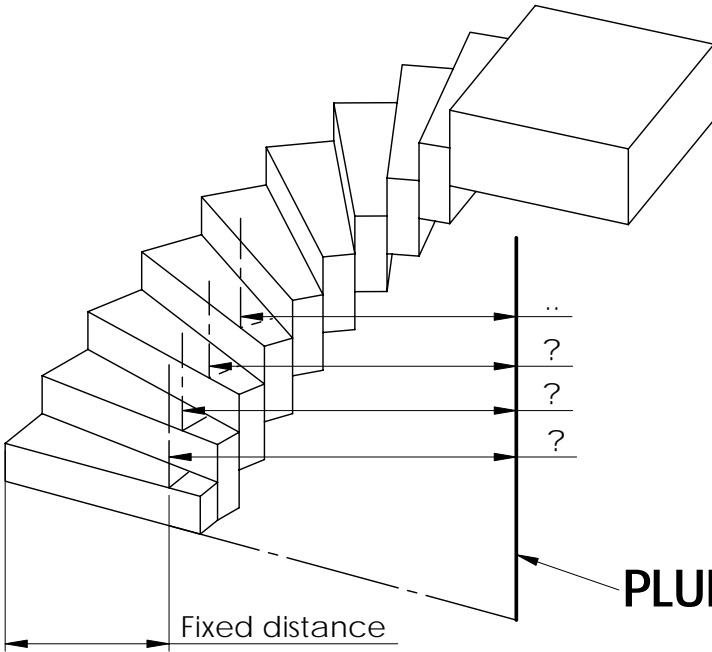
Measure from plumb line 'B' to the corner of each tread nose on the left side of stairs

All measurements should be taken horizontally from the plumb line.

Riser #	Height Diagram 1	NET tread depths		Plumbline A			Plumbline B		
		Left Diagram 1	Right Diagram 2	Left Diagram 3	@fixed distance Diagram 4	Right Diagram 5	Left Diagram 6	@fixed distance Diagram 7	Right Diagram 8
1							??		
2							??		
3							??		
..							...		



DIAGRAM 7



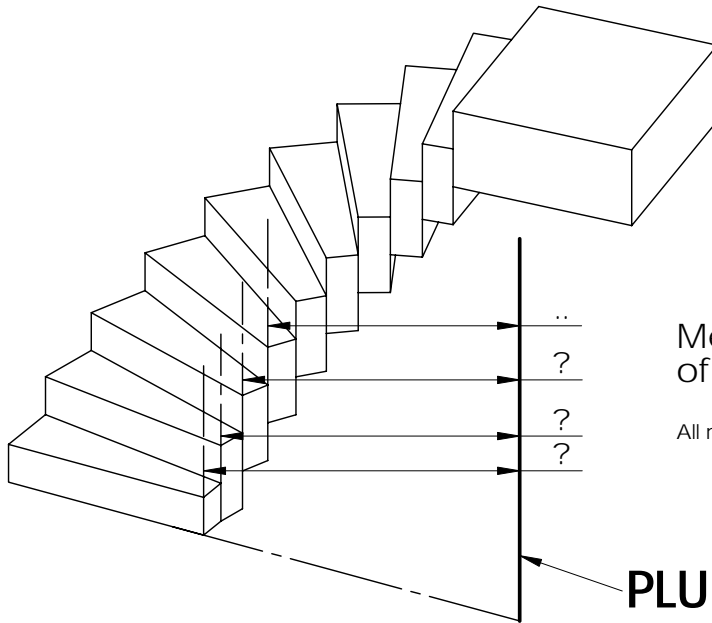
Measure from plumb line 'B' to the point marked off (at fixed distance from the intended trackside wall)

All measurements should be taken horizontally from the plumb line.

PLUMB LINE 'B'

Riser #	Height Diagram 1	NET tread depths		Plumbline A			Plumbline B		
		Left Diagram 1	Right Diagram 2	Left Diagram 3	@fixed distance Diagram 4	Right Diagram 5	Left Diagram 6	@fixed distance Diagram 7	Right Diagram 8
1								??	
2								??	
3								??	
..								...	

DIAGRAM 8



Measure from plumb line 'B' to the corner of each tread nose on the right side of stairs

All measurements should be taken horizontally from the plumb line.

PLUMB LINE 'B'

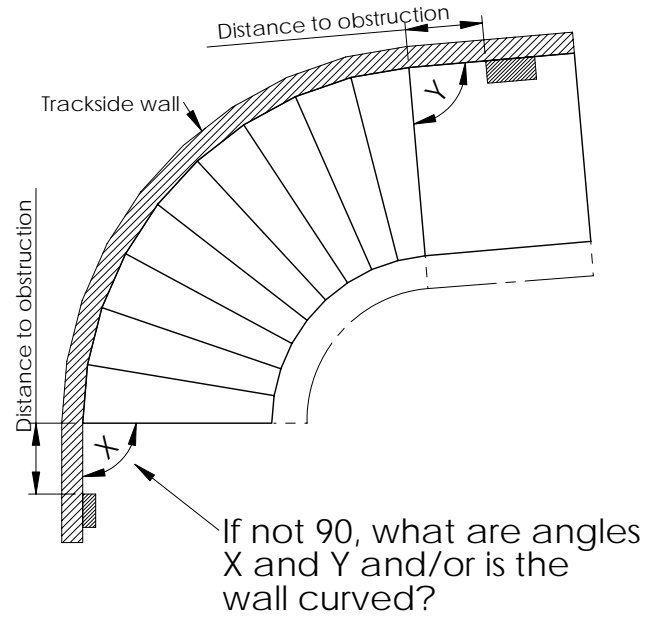
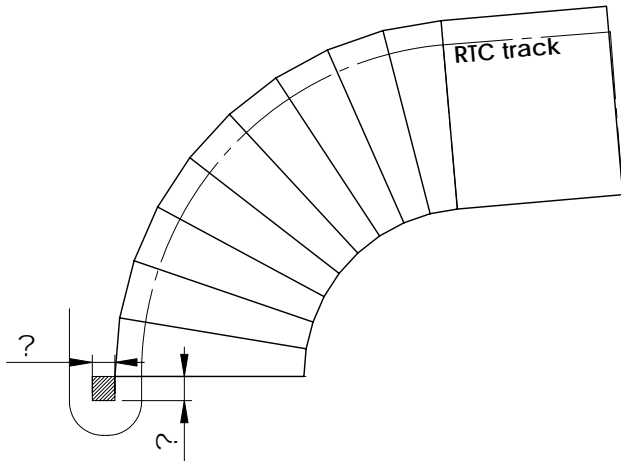
Riser #	Height Diagram 1	NET tread depths		Plumbline A			Plumbline B		
		Left Diagram 1	Right Diagram 2	Left Diagram 3	@fixed distance Diagram 4	Right Diagram 5	Left Diagram 6	@fixed distance Diagram 7	Right Diagram 8
1								??	
2								??	
3								??	
..								...	



IMPORTANT INFORMATION

Please provide *at least* a rough plan sketch of the stair layout digital photos are often helpful.

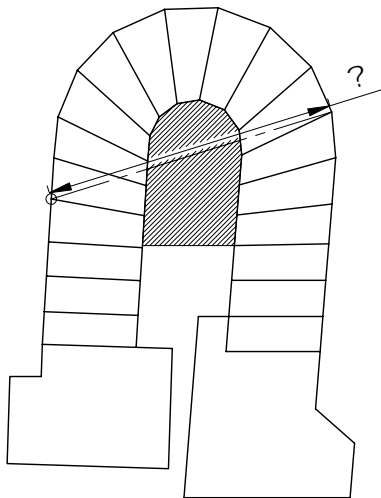
Do not forget to provide any information on newells or obstructions that will be anywhere near the expected track path.



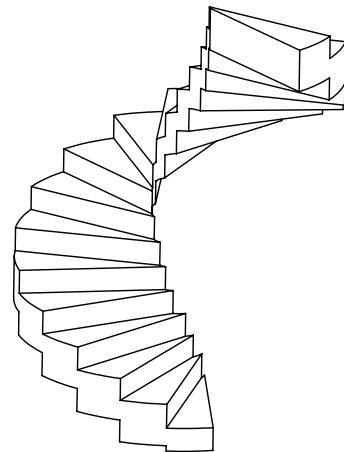
ARE ADDITIONAL INSTRUCTIONS NECESSARY?

Please don't hesitate to contact us if further explanation is required - It is far better to get a survey like this correct first time!

Also note that that different instructions may be required if there is an obstruction restricting line of sight across the stairs or the spiral configuration is more complex eg. a larger than 180 degree turn or a tight radius staircase.



No line of sight to measure between points due to obstruction



Tight external radius



