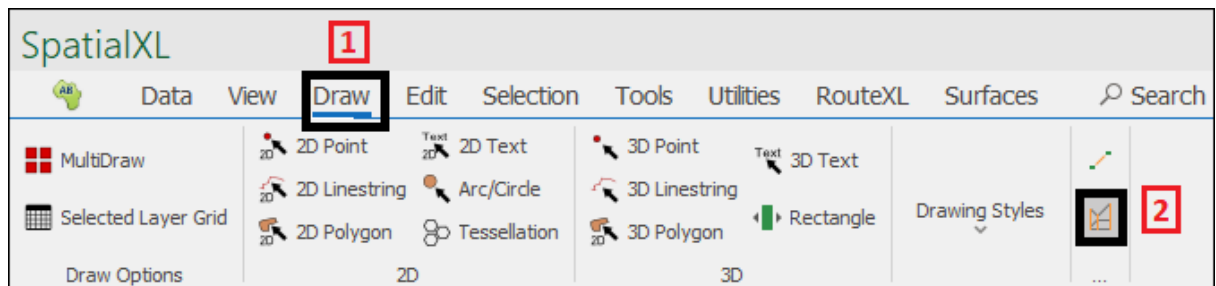


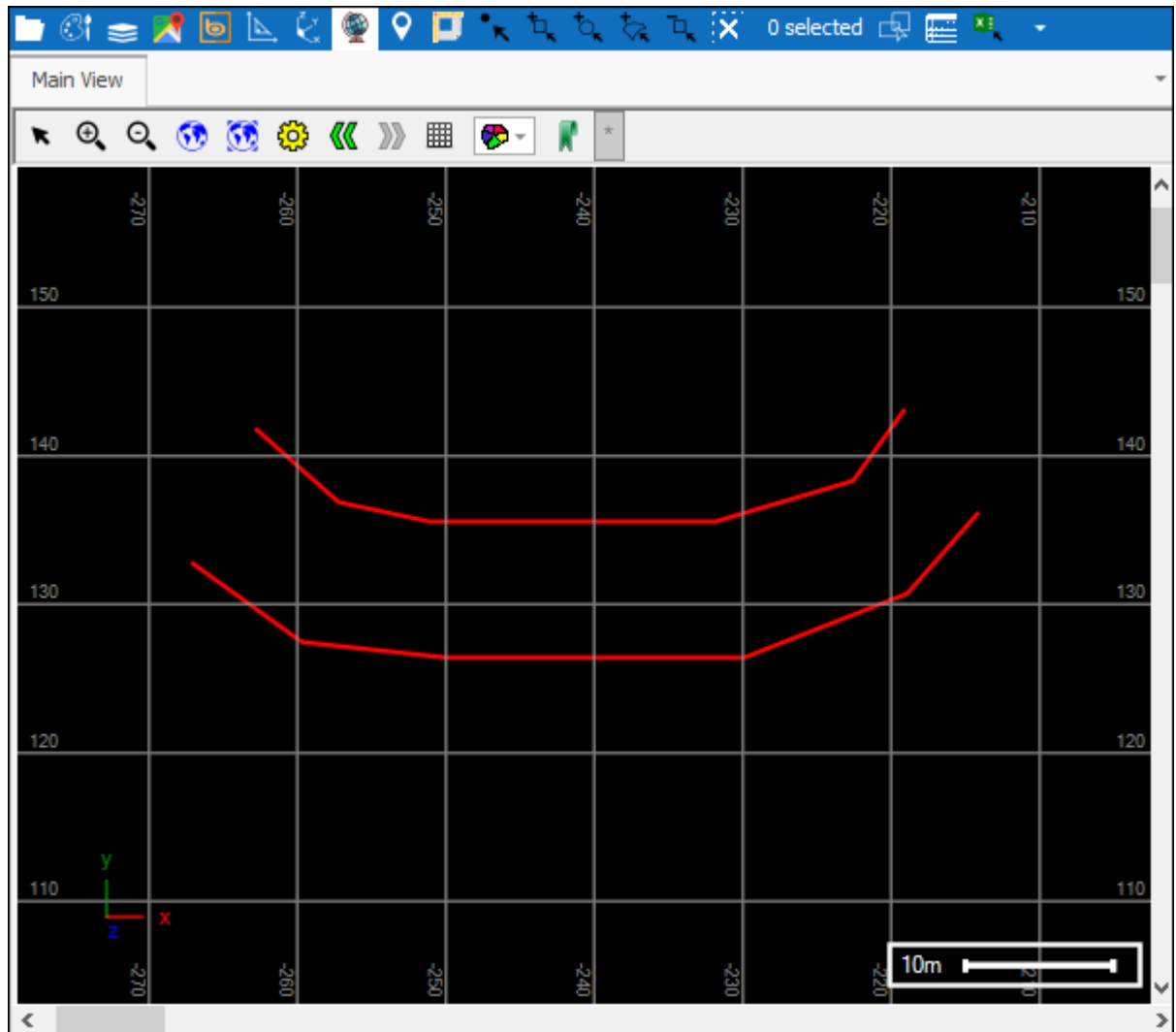


Excavation Instructions User Guide

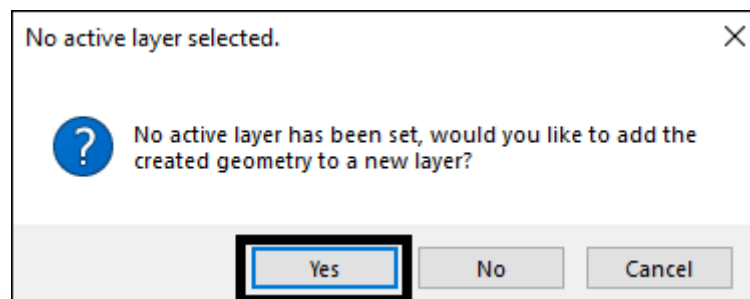
Excavation Instructions is a tool available in all our spatial products that allows you to generate instructions for an excavation between two linestring borders relative to a working line. It is found in the **Draw** tab⁽¹⁾⁽²⁾:



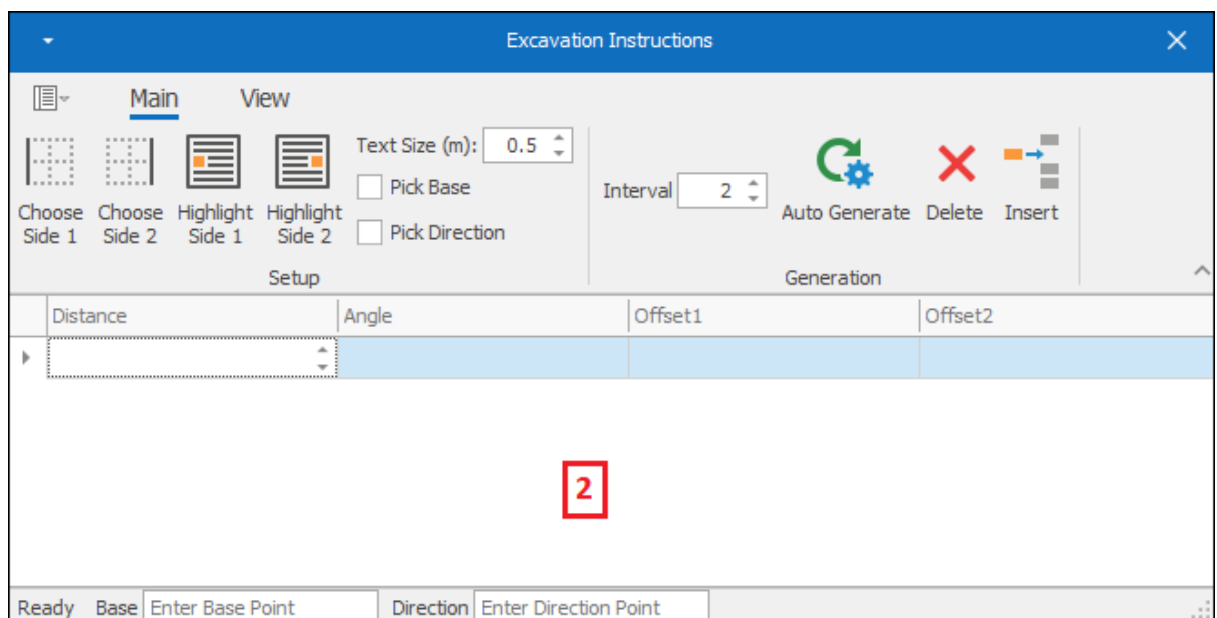
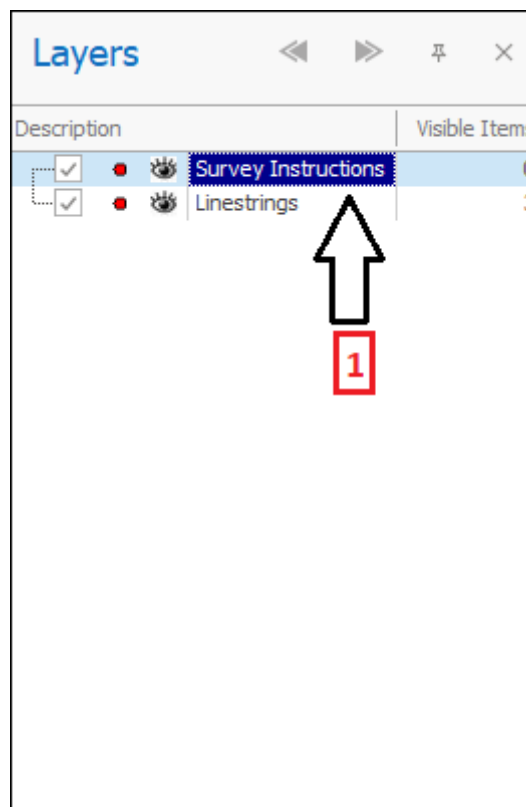
Before using this tool, you would have your linestring borders for the excavation:



Click on the tool to open, if you don't already have an active layer then it will ask you to create a new layer for the instructions to be drawn to, click **Yes**:

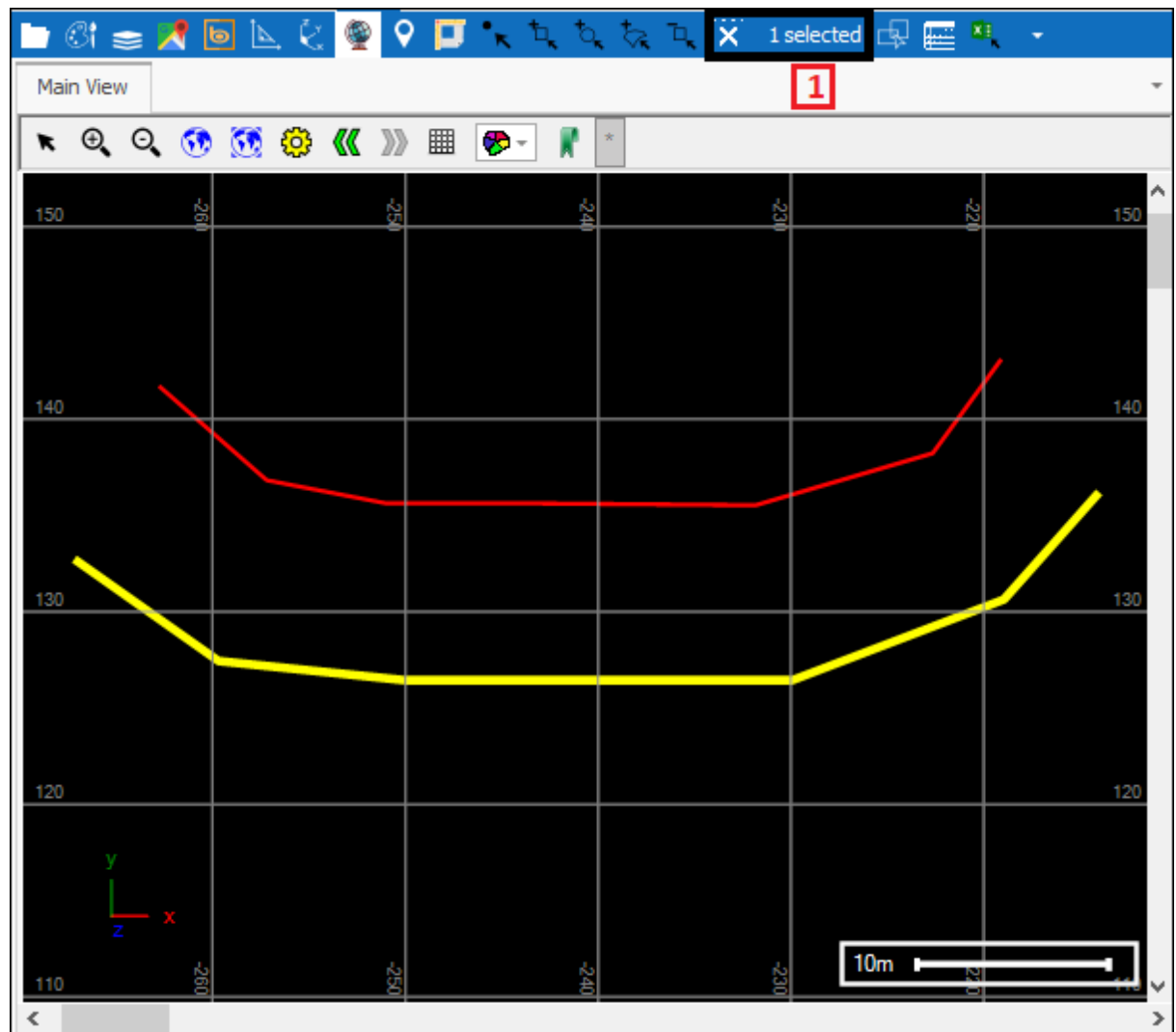


A **Survey Instructions** layer(1) is created for you, and the following dialogue will come up(2):



The first thing to do is to choose the sides of your excavation. Select the first side in your scene(1) and then click the **Choose Side 1** button(2):

Excavation Instructions User Guide



Excavation Instructions

Main View

Choose Side 1 Choose Side 2 Highlight Side 1 Highlight Side 2

Text Size (m): 0.5

Interval 2

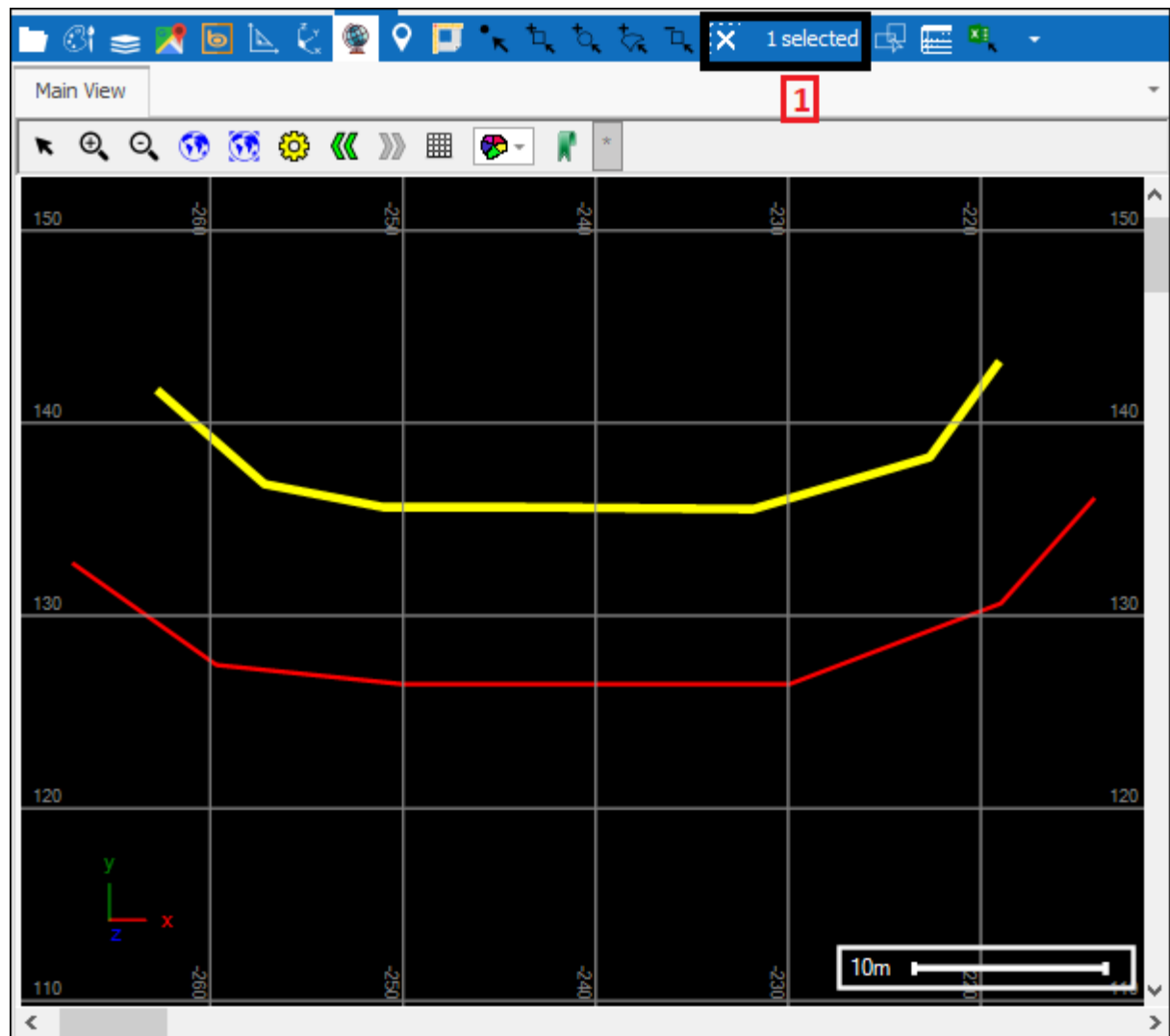
Auto Generate Delete Insert

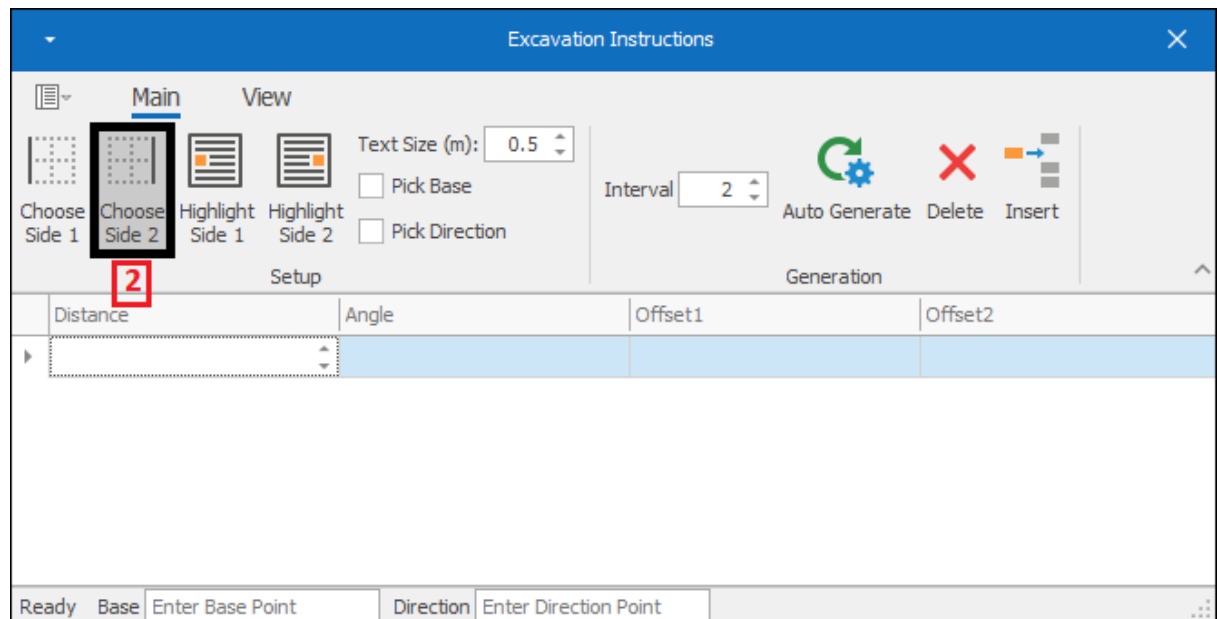
Generation

Distance	Angle	Offset1	Offset2

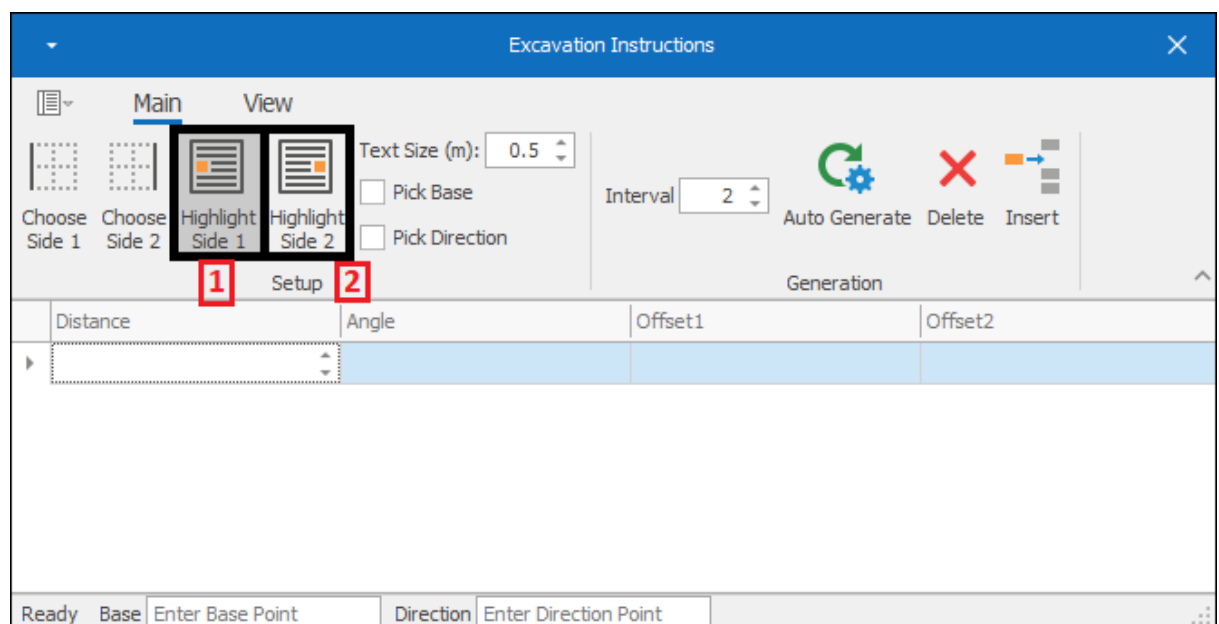
Ready Base Enter Base Point Direction Enter Direction Point

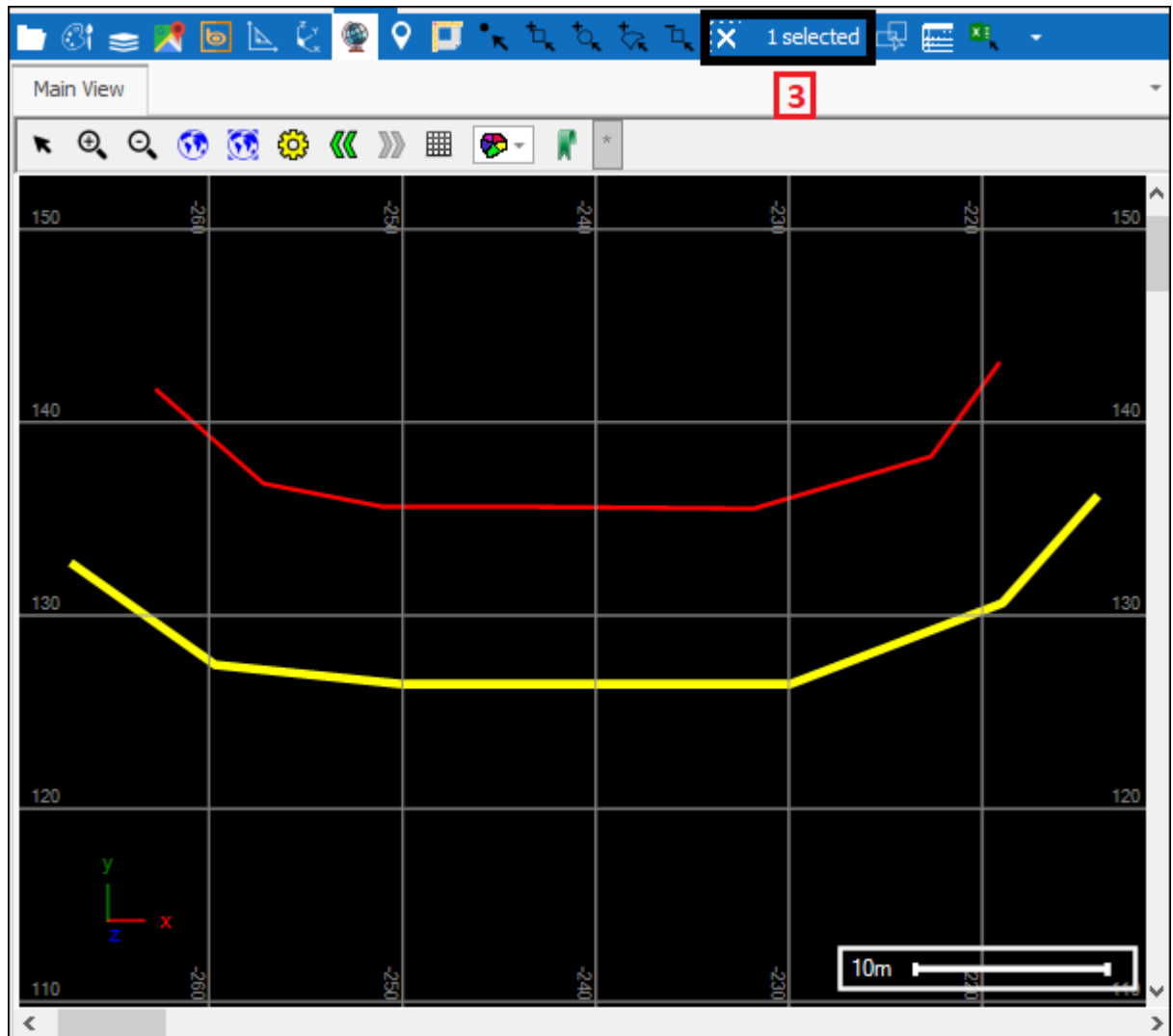
Next you choose the second side by selecting in your scene(1) and then clicking the **Choose Side 2** button(2):





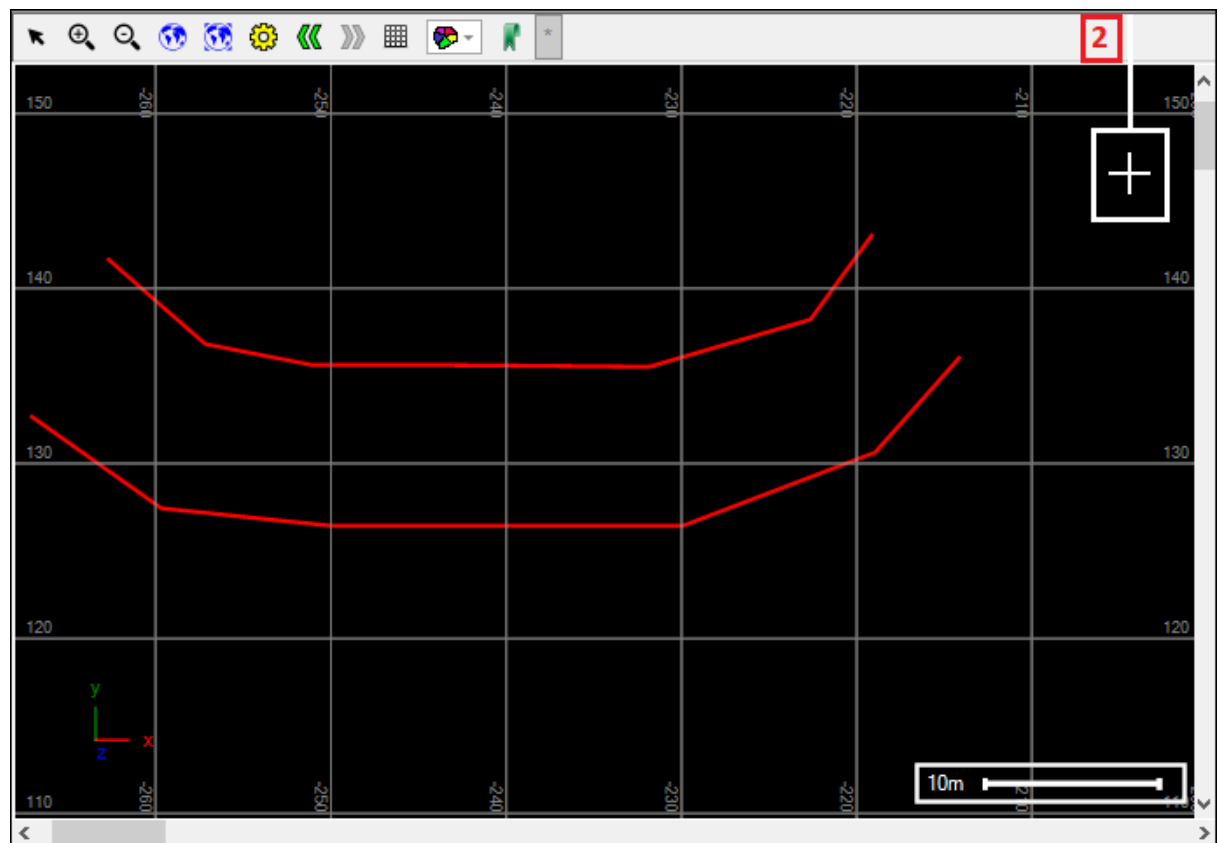
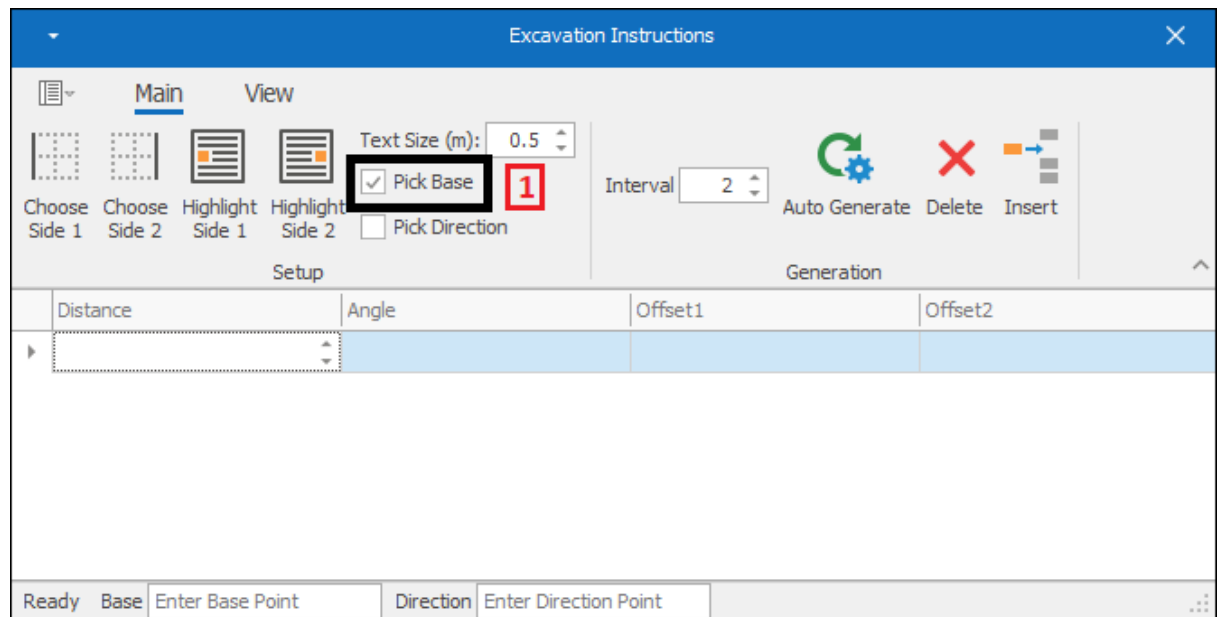
You can confirm and see which side is side 1 and side 2 by clicking the **Highlight Side 1 button(1)** and **Highlight Side 2 button(2)** which will highlight the side in your scene(3). You can unhighlight it by clicking the button again:

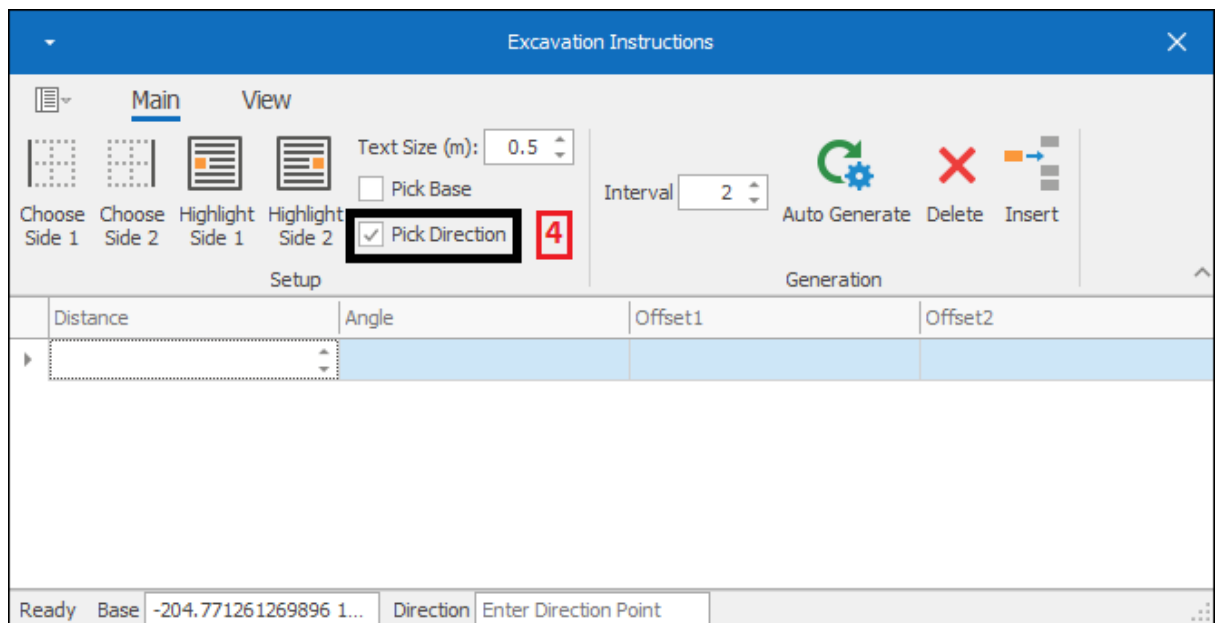
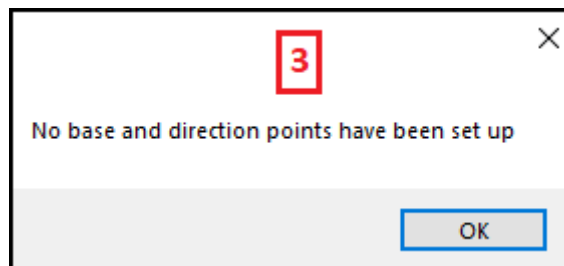


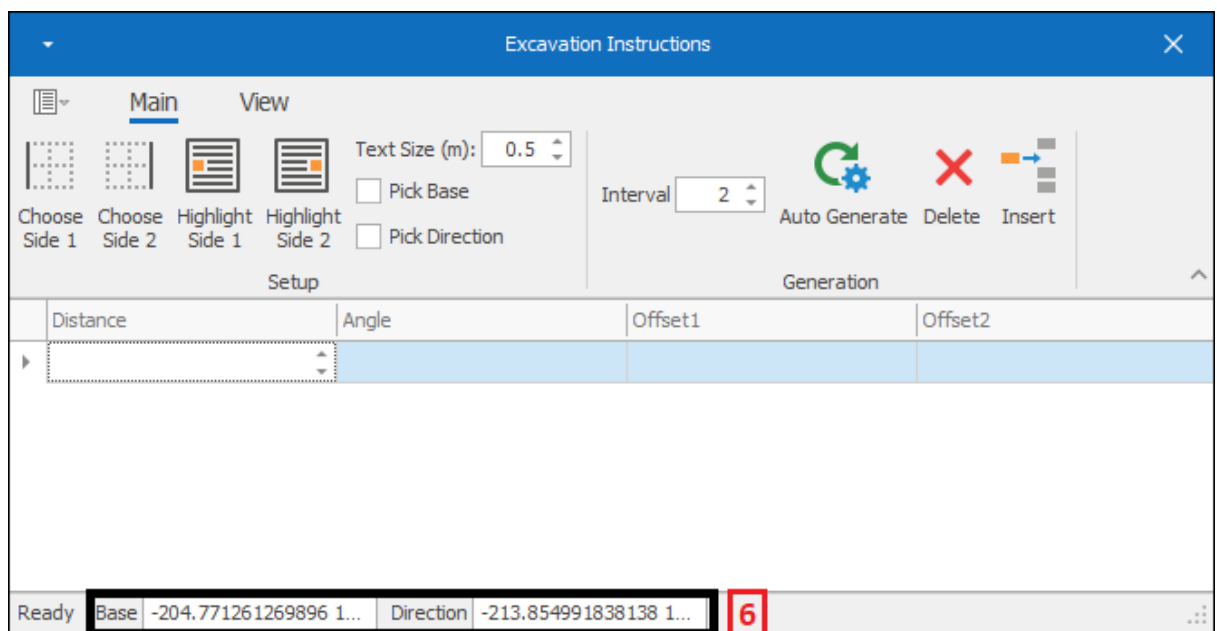
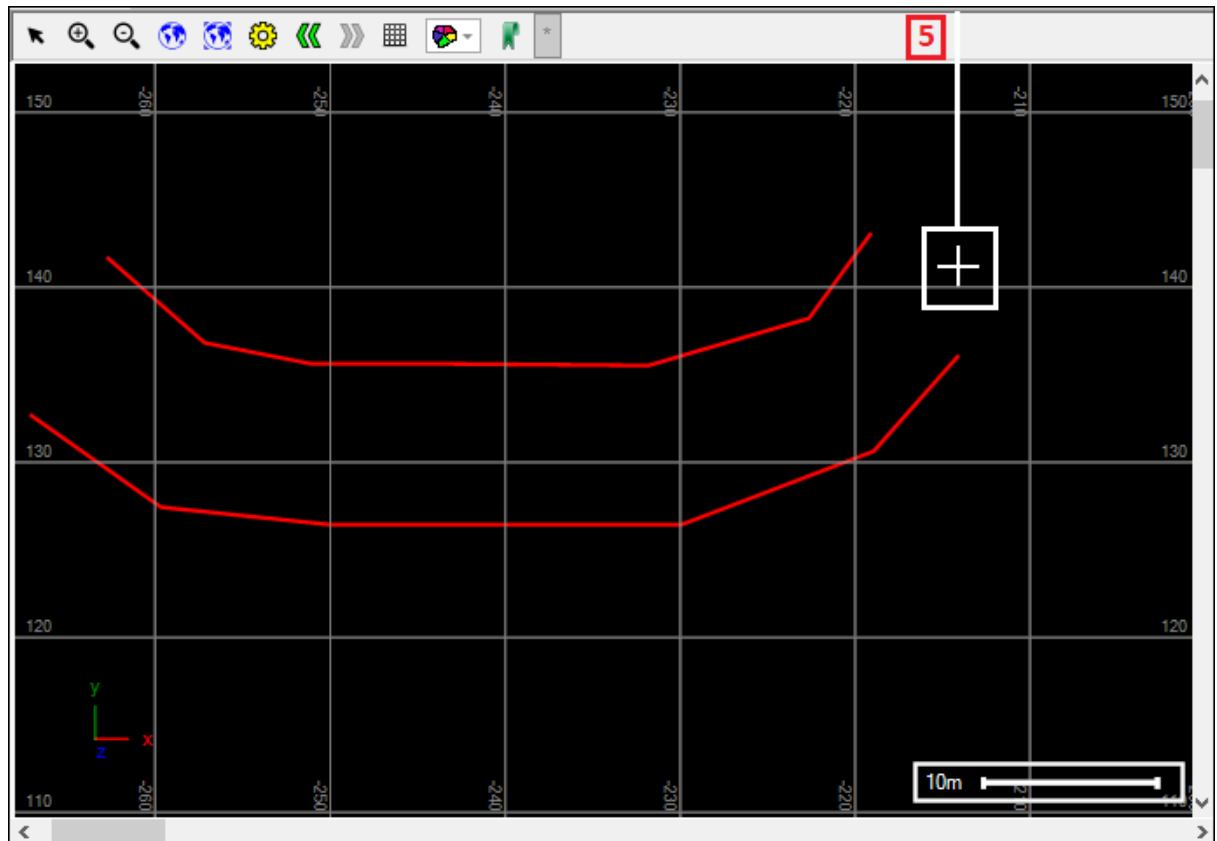


The next thing to do is to pick the base peg or point in your scene. Tick on **Pick Base**(1) and then click in your scene at the point(2), this will then warn you that your direction has not been set up(3), click **OK**, and then tick on **Pick Direction**(4) and then choose the direction from the base point by clicking in your scene(5). The values are populated in the boxes below(6):

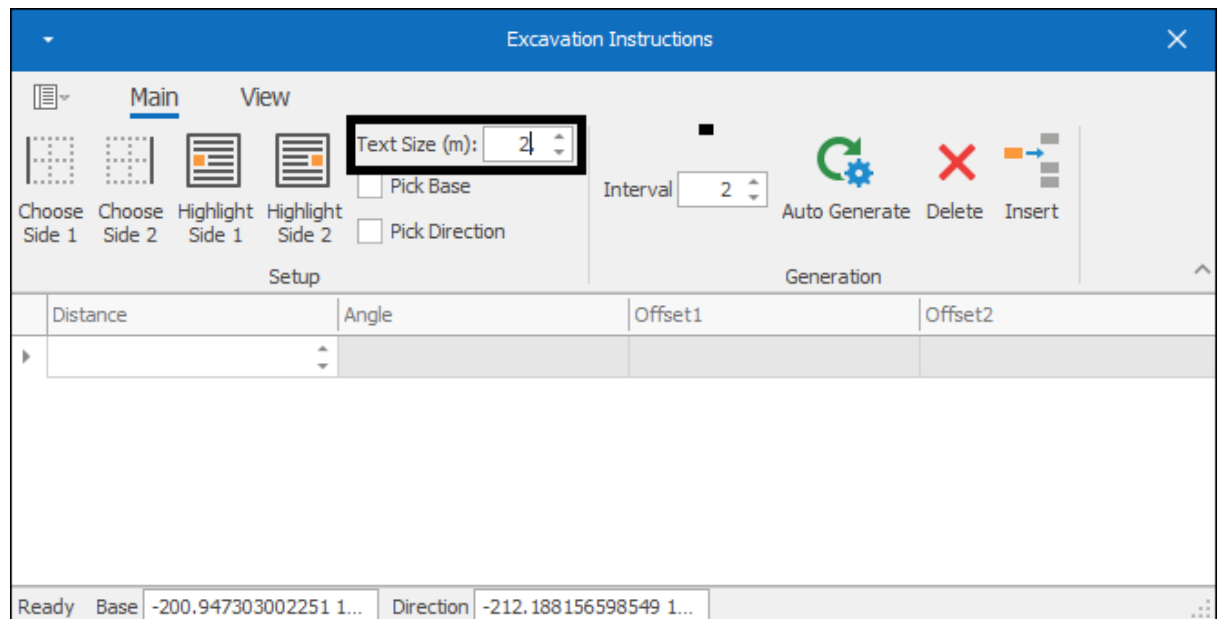
Excavation Instructions User Guide



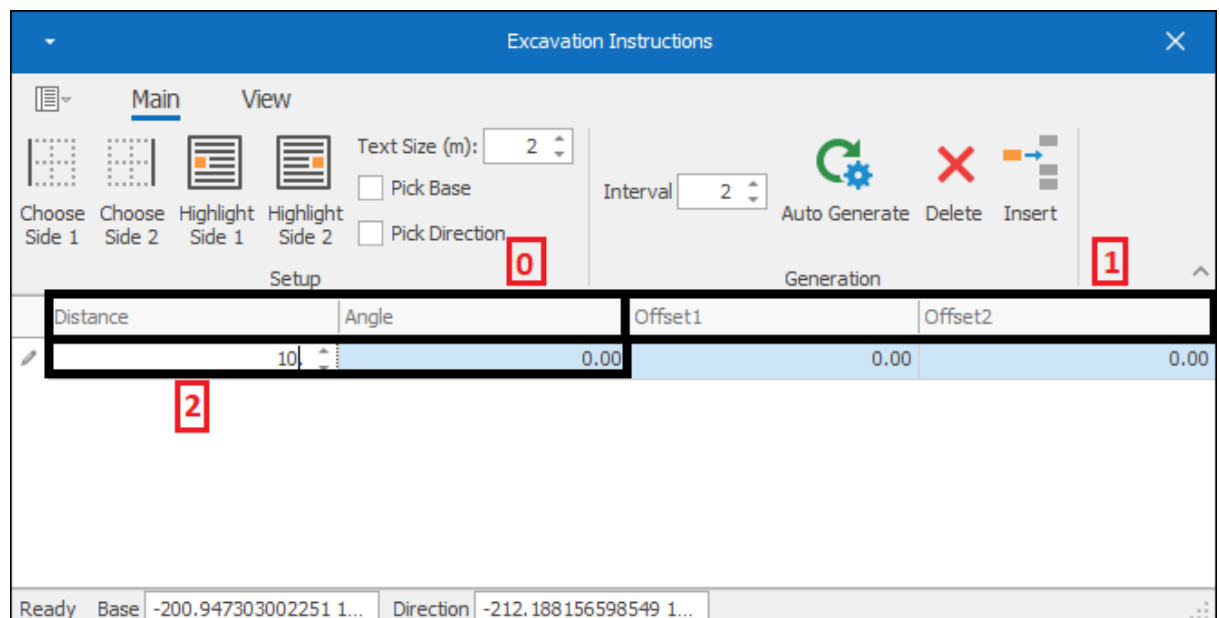


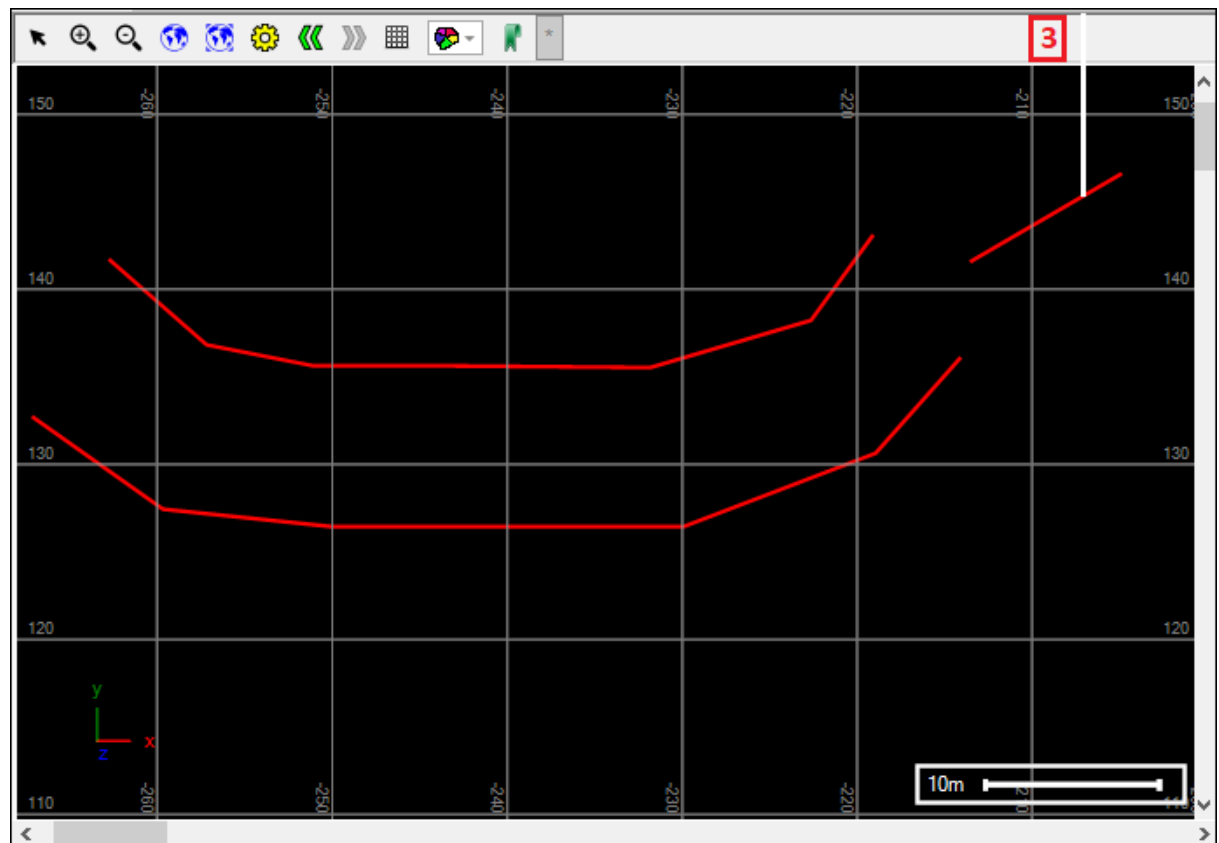


Choose the text size for the text that will be displayed by the line that will be going through your excavation by **Text Size(m)**:

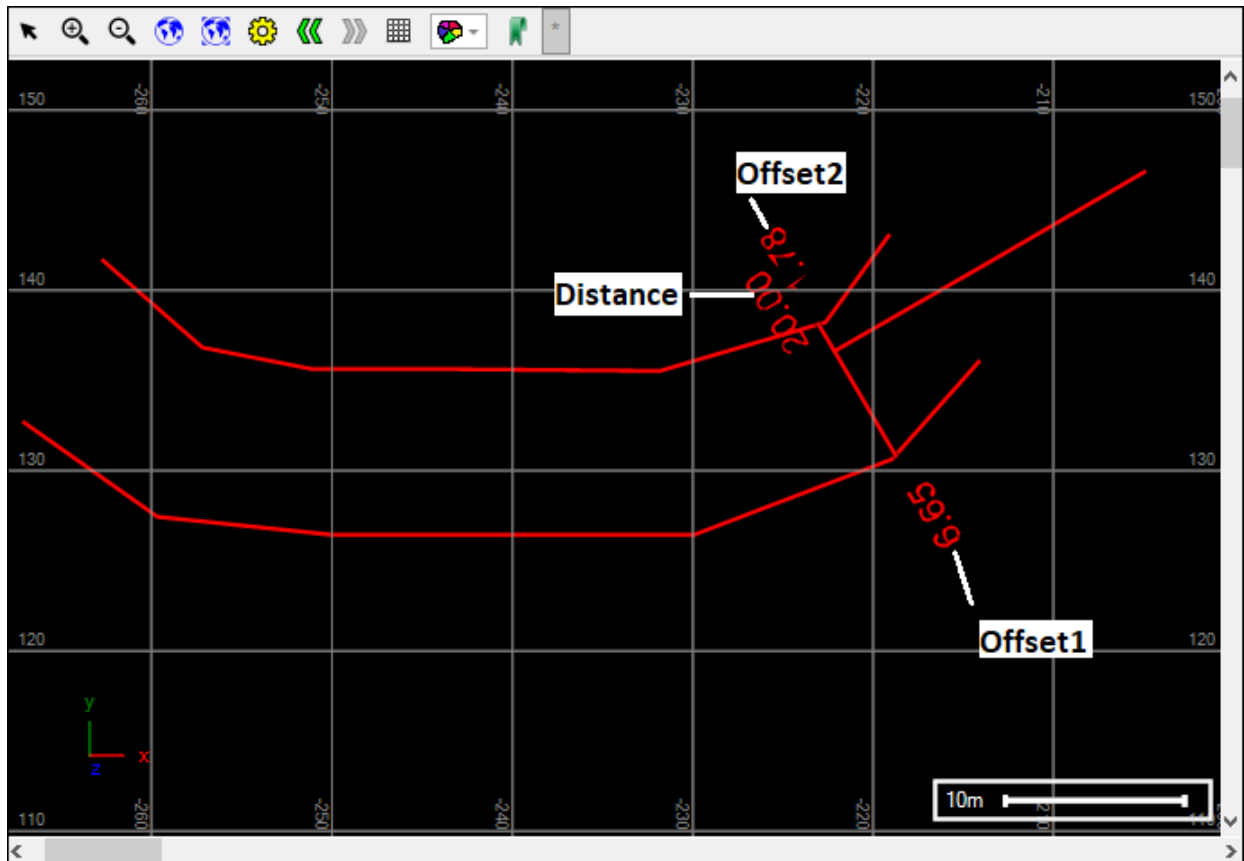


Now, in the grid below you can type in the **Distance** and **Angle(0)** for the line that will be going through your excavation. The **Offset1** and **Offset2(1)** will automatically populate as your line is drawn, being the offset of the line from each side of the excavation; in my example I will put my Distance as 10 metres and leave my Angle at 0(2), as I do this I see the first part of my line appear on the scene(3):

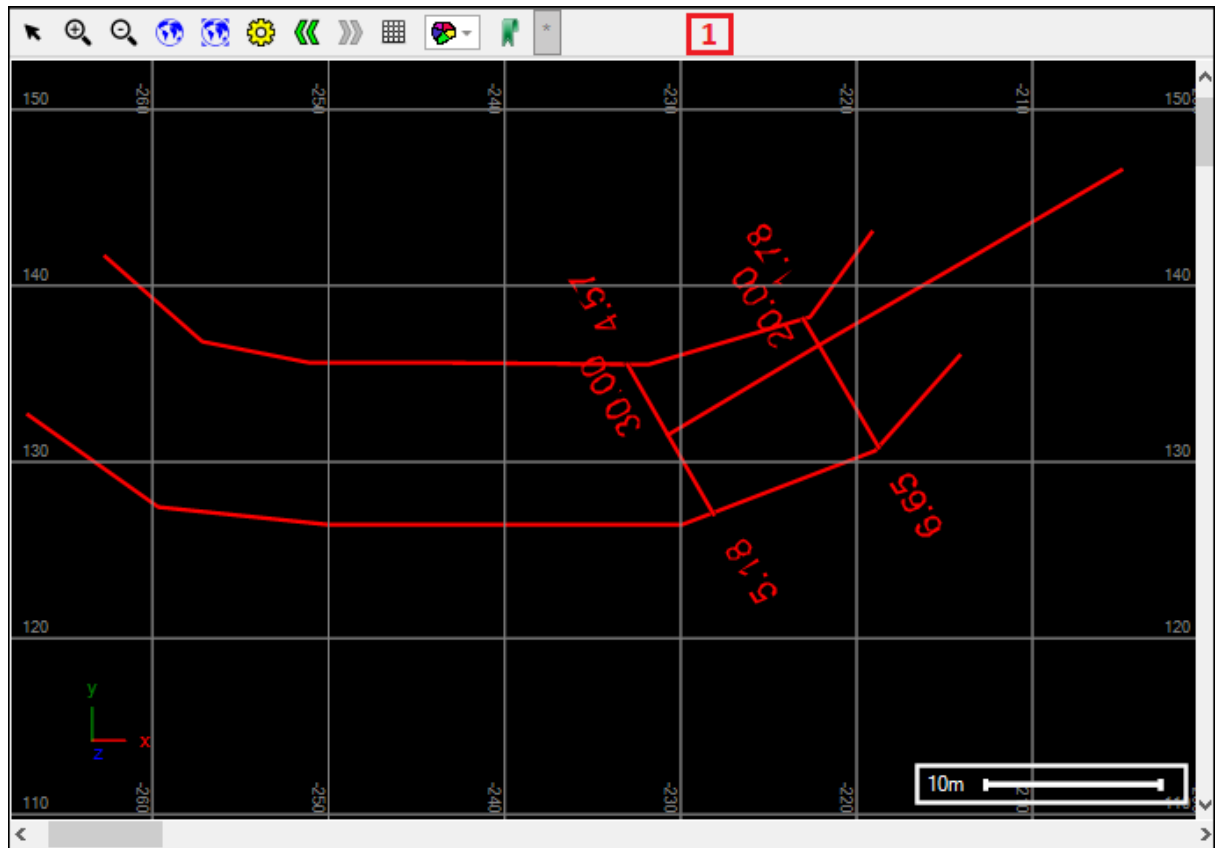




Now I will add another row in the grid to make the next part of the line and as you will see when the line goes into my excavation the different values are now displayed beside it:



I will add another row in my grid and as you will see the line now needs to turn in order to follow the shape of the excavation(1) so the next row I enter in I'll change the angle to follow the shape(2):



Excavation Instructions ✕

Main

View

Text Size (m):

☐ Pick Base
☐ Pick Direction

Interval

Auto Generate

Delete

Insert

Setup

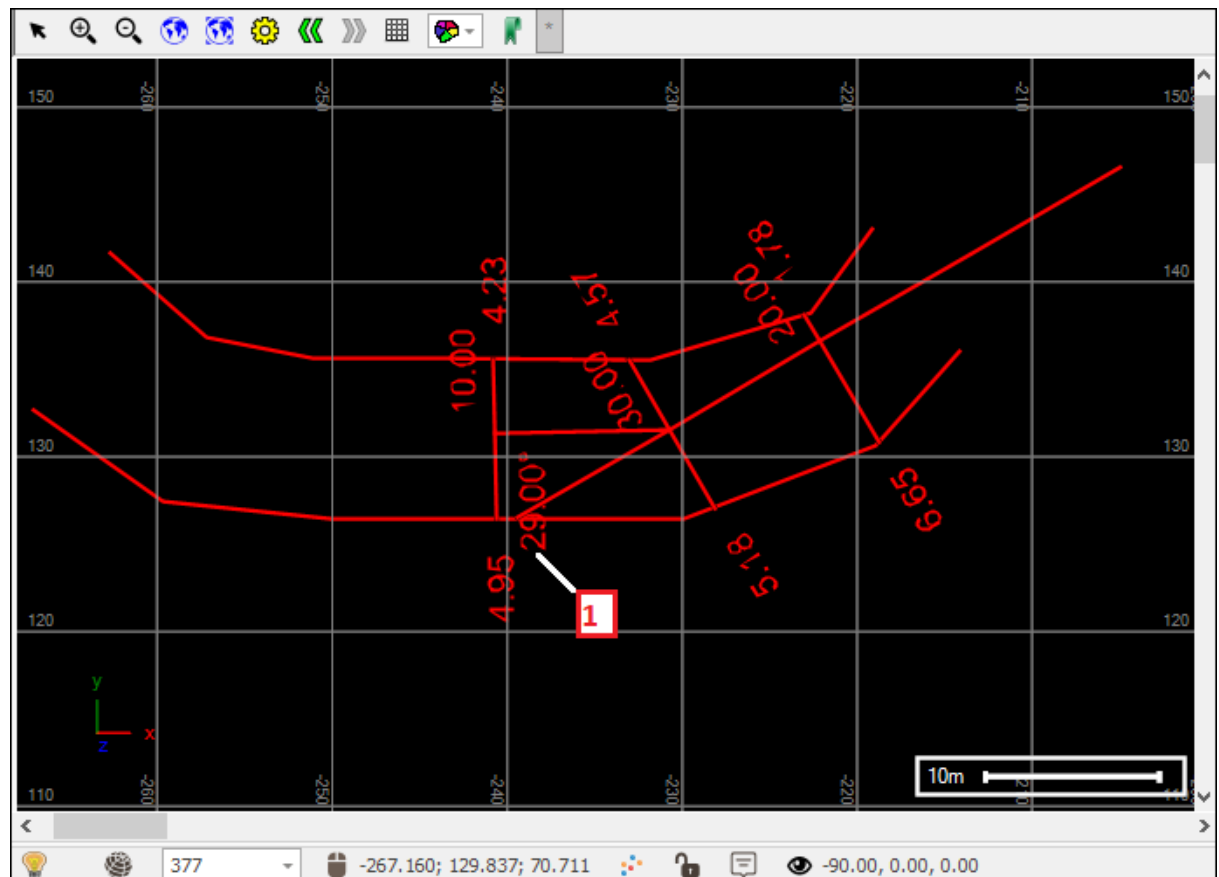
Generation ^

	Distance	Angle	Offset1	Offset2
	10.00	0.00	0.00	0.00
	10.00	0.00	5.65	3.41
	10.00	0.00	4.93	6.03
	10.00	<div style="border: 2px solid black; padding: 2px; display: inline-block;">29</div>	5.45	5.04

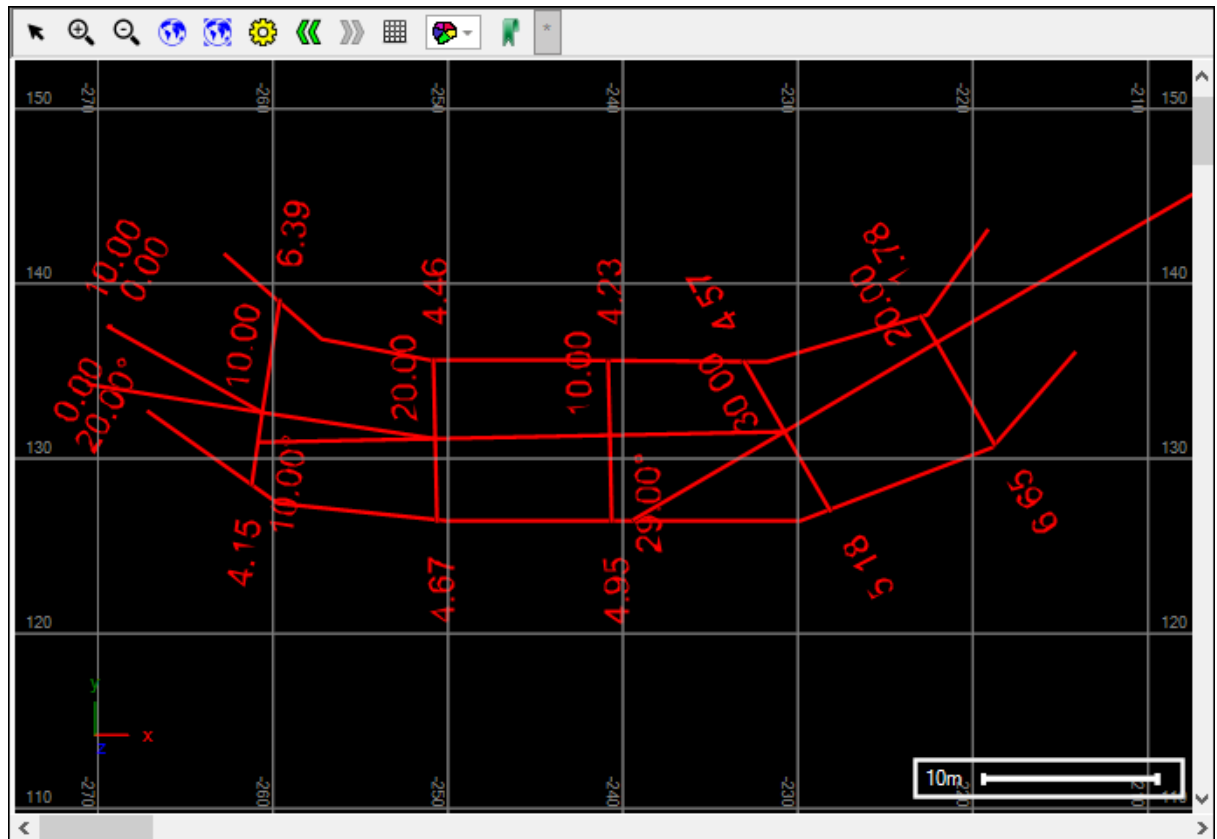
2

Ready
Base -200.947303002251 1...
Direction -212.188156598549 1...

And as you can see the next part of the line changes angle and follows the excavation and an angle value displays as well at this point(1):



I will enter in more rows and change angles as needed until my line has gone all the way through my excavation:



If you want to delete a row (and therefore part of the line drawn) simply select the row(1) and then click the **Delete** button(2):

Excavation Instructions ✕

Main
View

Choose
Side 1

Choose
Side 2

Highlight
Side 1

Highlight
Side 2

Text Size (m):
☐ Pick Base
☐ Pick Direction

Interval

Auto Generate
Delete
Insert

Setup

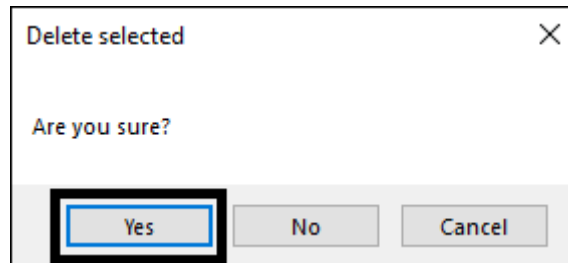
Generation

	Distance	Angle	Offset1	Offset2
	10.00		0.00	0.00
	10.00		0.00	6.65
	10.00		0.00	5.18
	10.00		29.00	4.95
	10.00		0.00	4.67
<div style="border: 2px solid black; padding: 2px; display: inline-block;">1</div>	10.00	10.00	4.15	6.39
	10.00		20.00	0.00

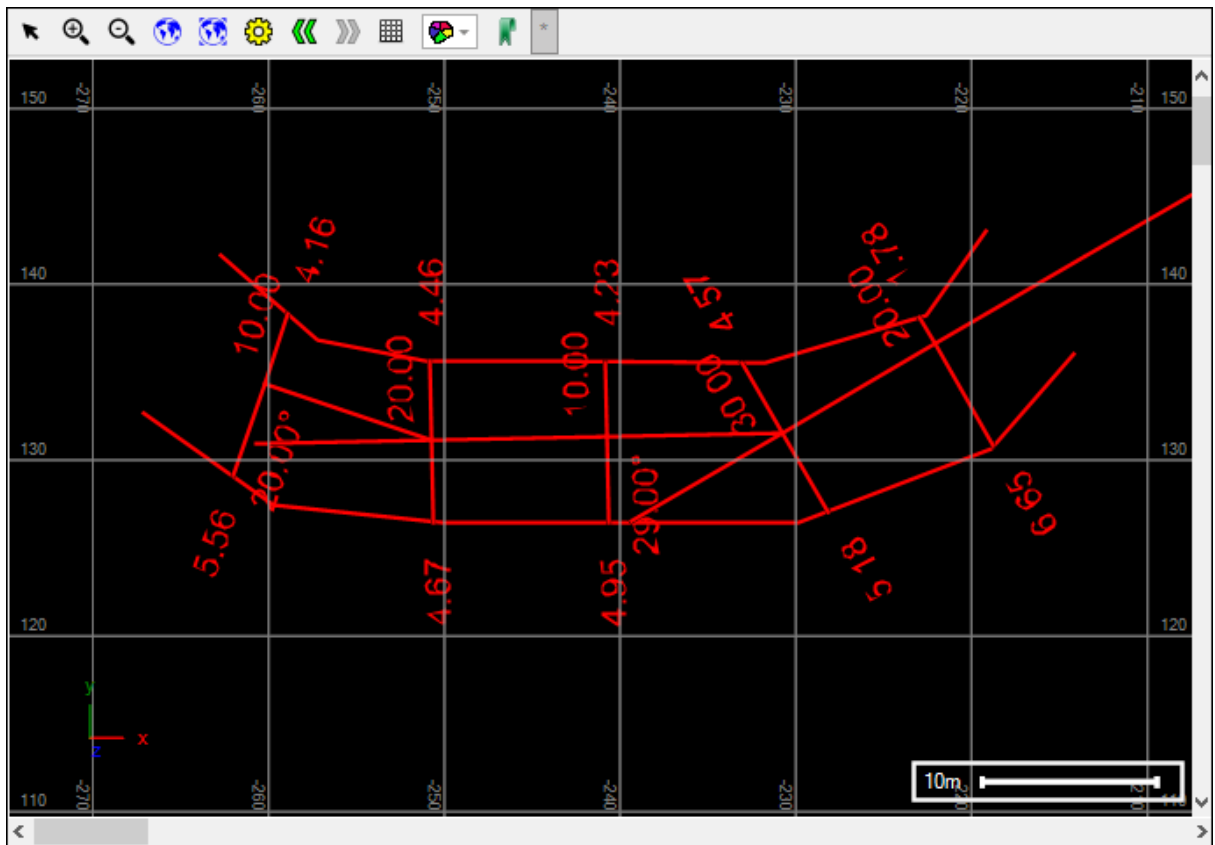
Ready
Base -204.771261269896 1...
Direction -213.854991838138 1...

16

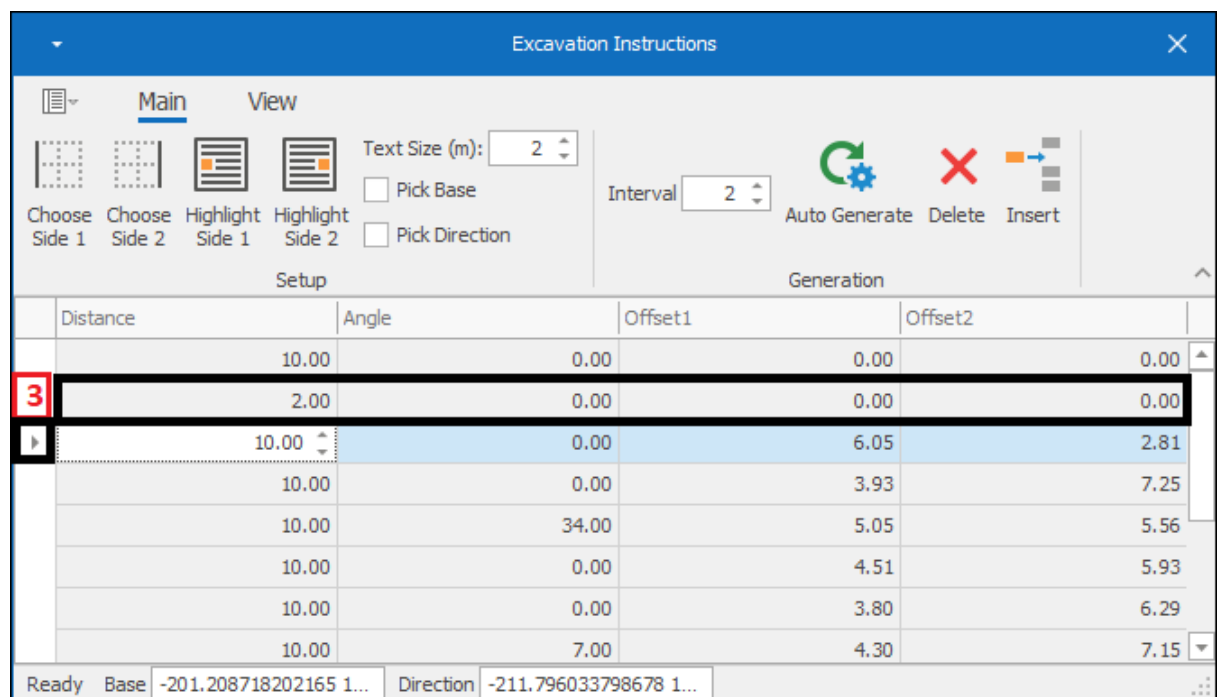
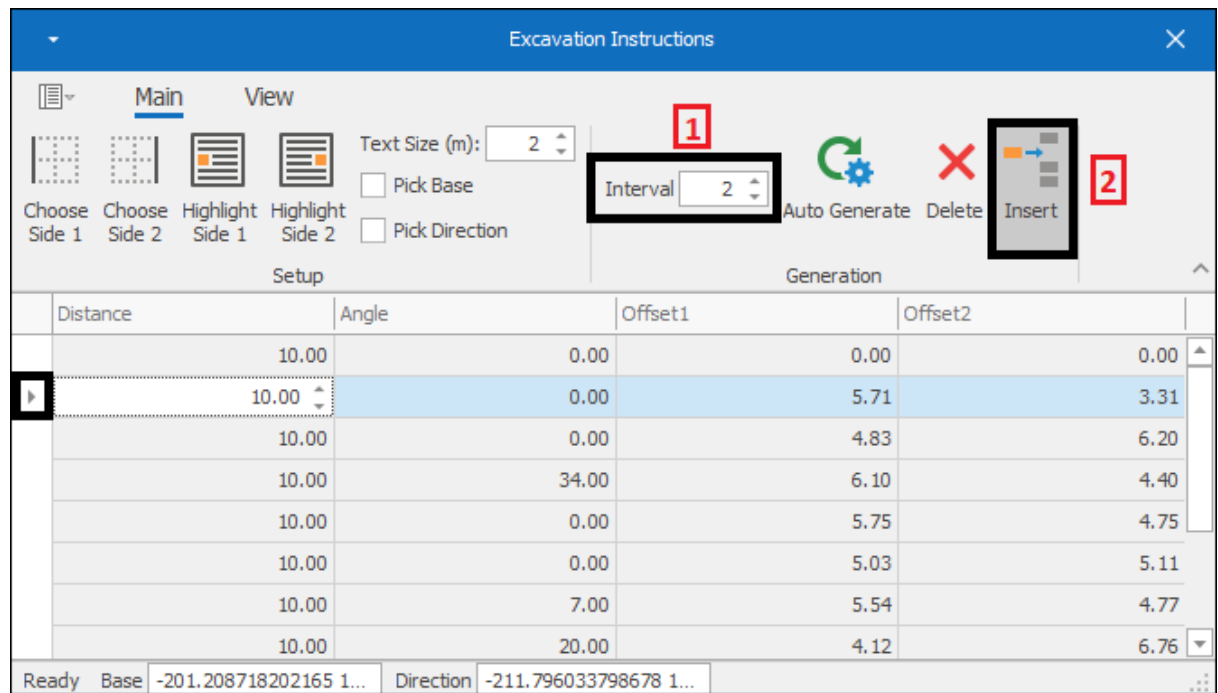
The following message will come up click **Yes**:



And your row has been deleted, and the line will shift accordingly in your scene:



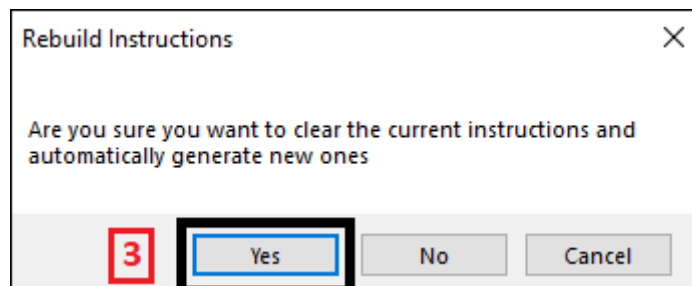
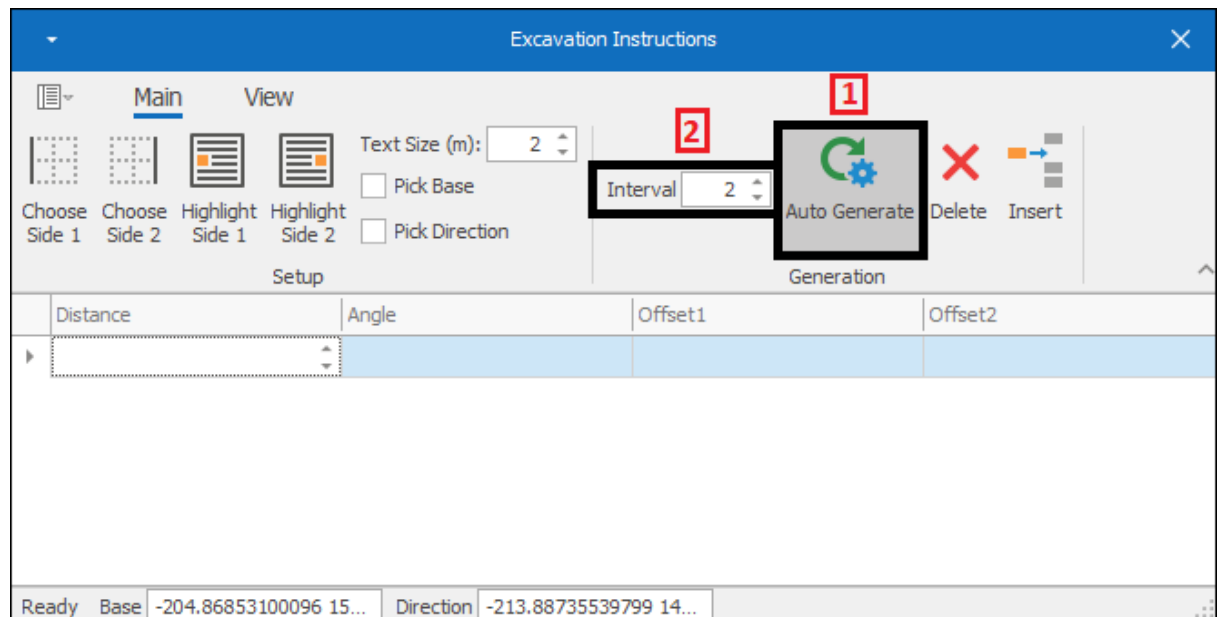
At **Interval(1)** is a default distance setting you can set for each new row that gets made in the grid. Now if I were to insert a row by using the **Insert(2)** button a row will be added with that distance and it will be added right before the current position in the grid:



Your line will of course shift accordingly once the new row is added.

What you can also do is instead of manually entering in rows is use the **Auto Generate**(1) button which will auto generate instructions using the interval

specified(2). The following message will come up and just click **Yes**(3) and your instructions will be auto generated(4):



Excavation Instructions User Guide

Excavation Instructions

Main View

Text Size (m): 0.5

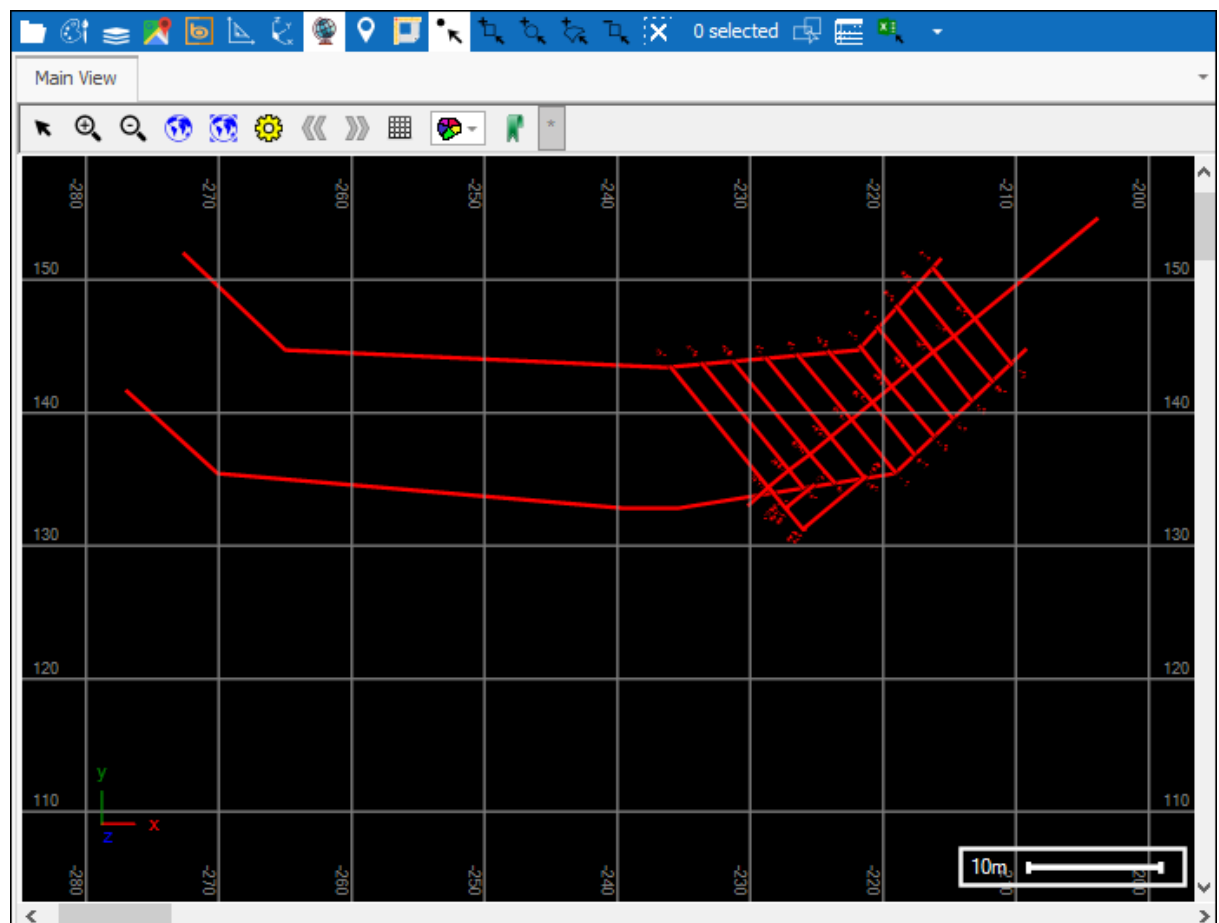
Interval: 2

Auto Generate Delete Insert

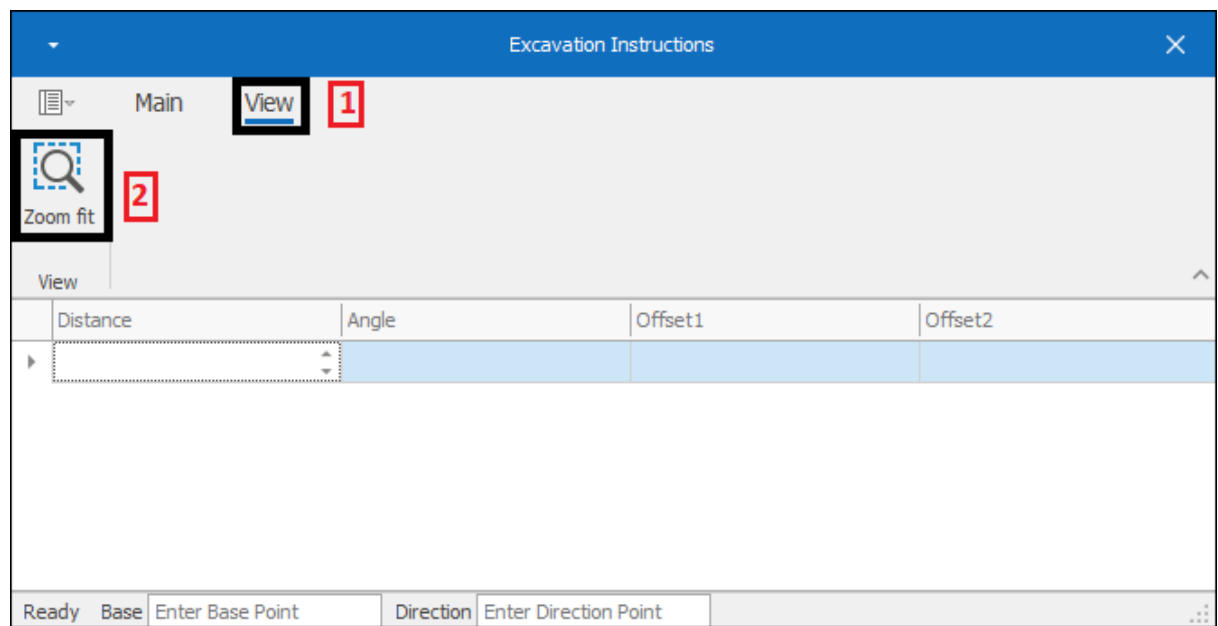
Setup

Distance	Angle	Offset1	Offset2
12.00	0.00	4.37	4.93
2.00	0.00	4.49	4.65
2.00	0.00	4.62	4.38
2.00	0.00	4.74	4.10
2.00	0.00	4.87	3.82
2.00	0.00	4.99	4.97

Ready Base -203.822870201304 1... Direction -214.148770597903 1...



If you are zoomed or moved away from your excavation or you just want to fit it to your screen perfectly you can at any time go to the **View(1)** tab and zoom fit to it using the **Zoom fit(2)** button:



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