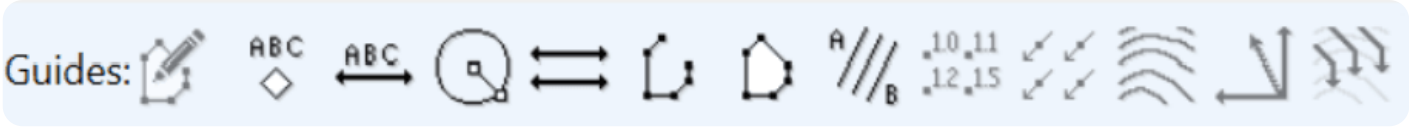
Guides Tools

Guides Tools - Overview



The ‘Guides’ layers allow extra information to be displayed on the field in the working area. This information can include elevation grids, flow directions, and contour lines.

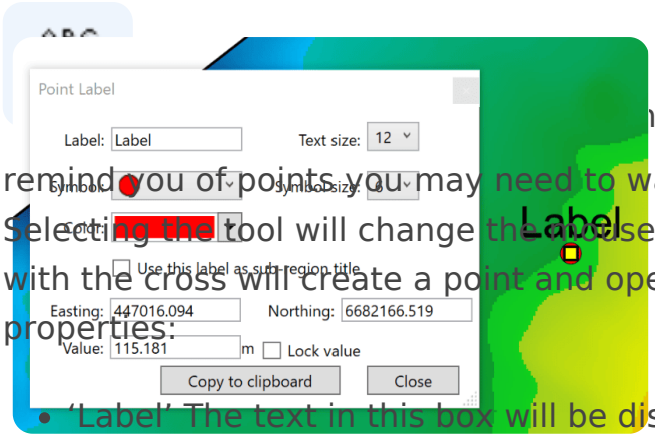
There are many tools available in the guides toolbar to help manage and quantify the elevations on the field.

Guides can also be exported in control files for use in T3RRA in cab software (e.g. T3RRA Cutta) by dragging them into the export window. See more in Exporting a T3RRA Cutta (*.tci) Control File.

Edit Guide

 The ‘Edit guide’ tool allows you to make changes to the selected guide. To edit a guide, right-click near it on the map and select Edit nearest > Guide, or select it in the layers panel on the right and press the ‘Edit Guide’ button. While editing, the guide’s window will open.

Point Label



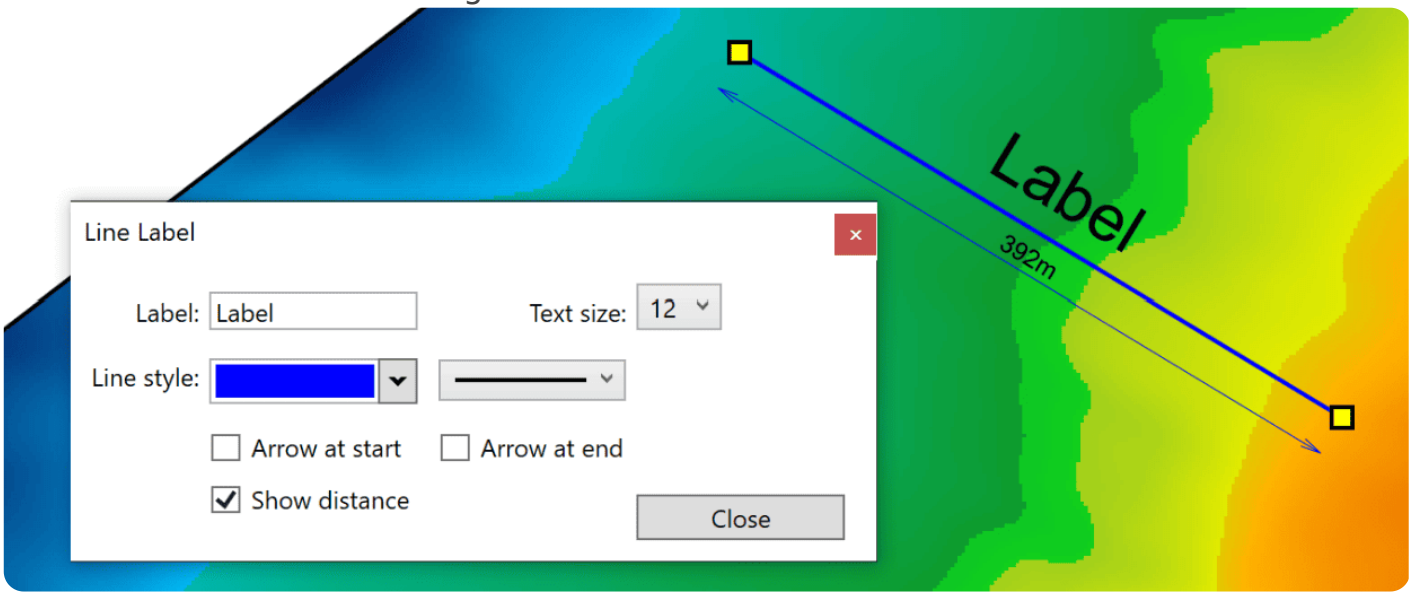
n a field as reference points, or simply to remind you of points you may need to watch out for or pay closer attention to. Selecting the tool will change the mouse cursor to a cross. Clicking in the working area with the cross will create a point and open a pop-up window, allowing you to edit its properties:

- ‘Label’ The text in this box will be displayed on the map. The size of the text can be altered by using the ‘Text size’ option on its right.
- ‘Symbol’ allows you to change the symbol or shape that is used for the point.
- ‘Symbol size’ allows you to make the symbol larger or smaller.
- ‘Color’ allows you to change the color of the label marker that is placed on the field in the working area.
- ‘Use this label as sub-region title’ affects the printed output. When selected, will use the label as the title for the region part it is in. It is only applicable when region-parts are set to output when printing.
- Easting and Northing show the coordinates of where the point label has been placed. It can be changed using the yellow point on the marker or by inputting new values here.
- ‘Value’ option displays the elevation or height of the label and can be changed by entering a new value here. If you enter a custom value, ensure you lock it with the neighboring option.
- ‘Lock value’ locks the value that has been set in the ‘value’ field so that it will not update to the currently active surface. Unlocking a point label is a way to get a surface elevation of cut/fill value at a specific point.
- Clicking on the ‘Copy to clipboard’ button will copy the name of the label and its coordinates so they can be used elsewhere.

When creating a label, if you have a label layer selected on the right, it will be added to that layer (otherwise it will create a new layer for it).

Line Label guide

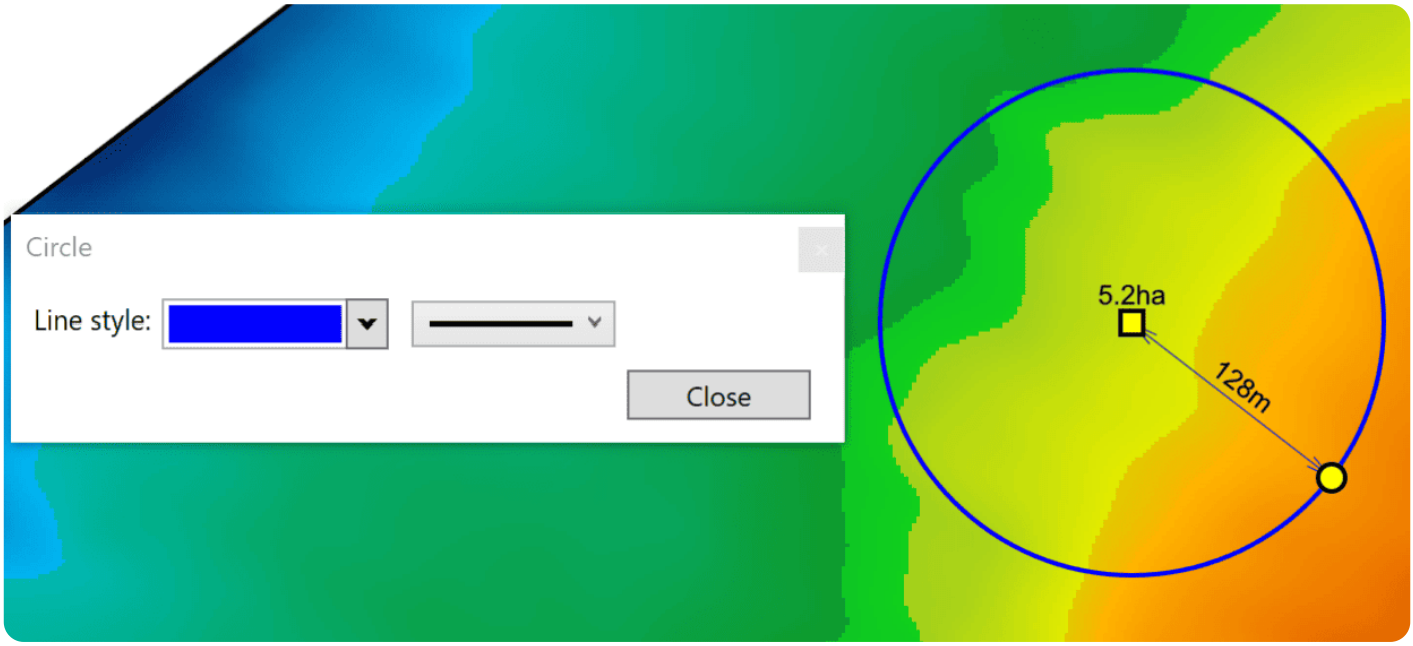
The ‘Line Label guide’ tool allows you to select two points anywhere on the field and display the distance between them with a label attached. When the tool has been selected the cursor will change into a cross.



- ‘Label’ This is the title of the line that has just been created. The label’s text size can be changed using the ‘Text size’ option to its right. This text size option will only affect the title on the guide, it will not increase the size of the text in the measurement.
- ‘Line style’. The left drop down menu allows you to change the color of the line, the right drop down menu allows you to select the thickness of the line.
- ‘Arrow at start’ and ‘Arrow at end’ allow you to add arrows to the start and end of the line.
- ‘Show distance’ adds a secondary, thinner, line below the original line that displays the distance covered by the line. This option is turned on by default.

Circle guide

The ‘Circle guide’ tool will display the radius and total area covered by the set circle. To use the tool, left click where you want the center of the circle to be and drag the mouse until the circle is at the desired size.

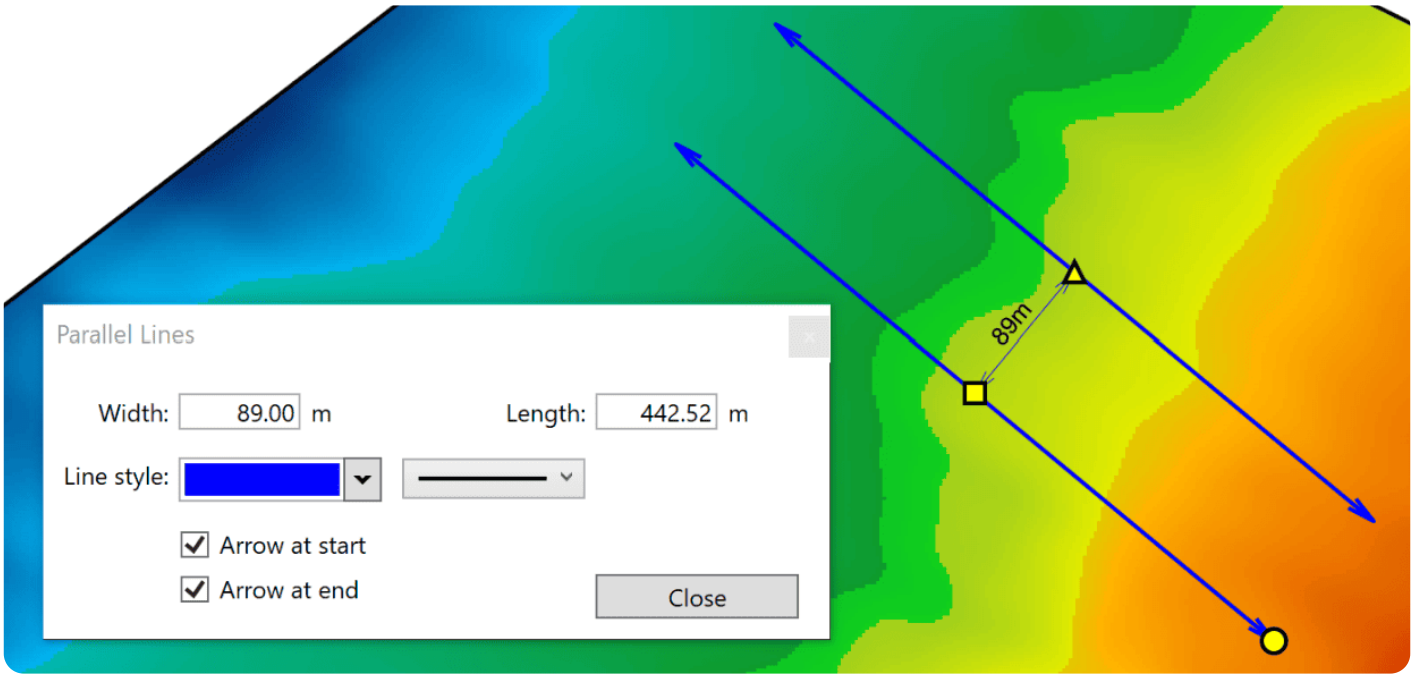


The option on the left in the window allows you to select the color of the circle. The option on the right allows you to select the thickness of the line.

At the center point of the circle, the total surface area of the circle is displayed. Starting from the same central point, a radius line will be placed showing the distance of the center to the edge of the circle.

Strip/Corridor guide

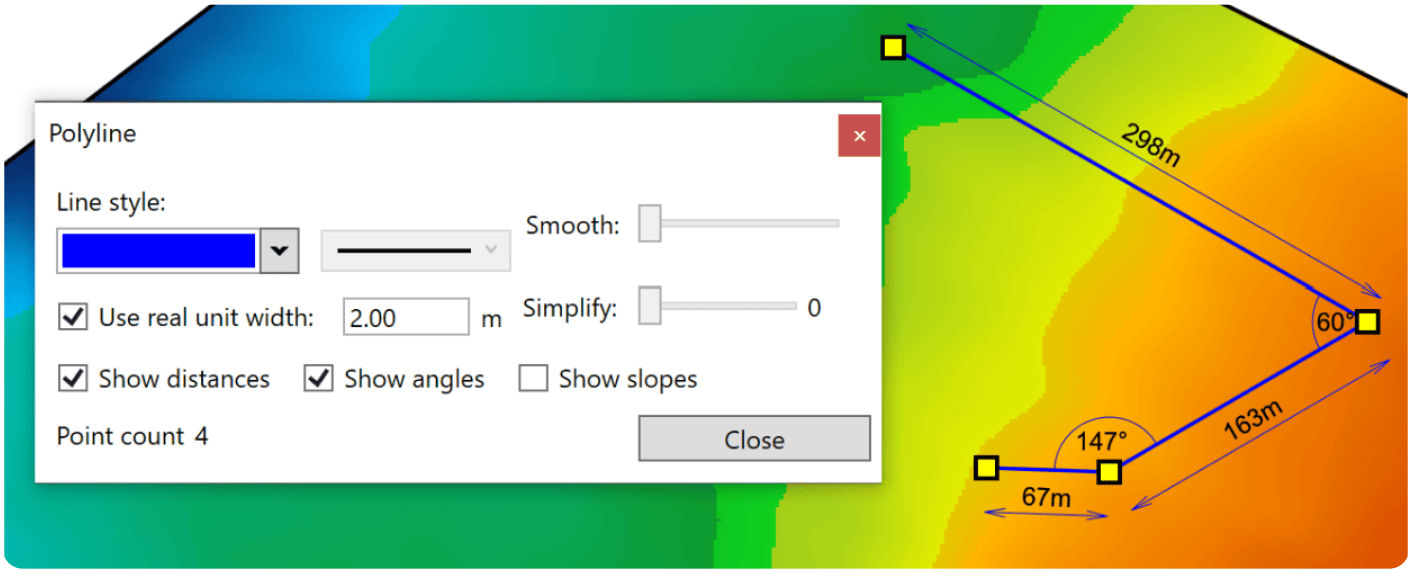
The ‘Strip/Corridor guide’ tool creates 2 parallel lines. When selecting this tool, click on the field where you would like the center point of 1 line to be, then drag away from this point to create a set of parallel lines.



- ‘Width’ displays the current width set between the lines. The distance between the lines can be adjusted by typing a new value here or by moving the yellow triangle on the surface.
- ‘Length’. Changing the length value adjusts the size of both lines. The length may also be adjusted by dragging the yellow circle point that is at the end of one of the lines.
- ‘Line style’. The left menu allows you to select the color of the lines, while the right menu lets you select line thickness.
- ‘Arrow at start’ and ‘Arrow at end’. Selecting either of these checkboxes will create arrows at their respective location on the lines.

Polyline measurement

The ‘Polyline measurement’ tool is used to create a guide line with multiple segments. The length of individual segments and the angles between them may also be displayed. When the tool has been selected, the cursor will change into a cross. Left clicking anywhere in the working area will place the first point, and clicking again will place segments. To finish adding segments, double click on the final point. Double clicking will open a window where settings for the polyline can be changed. The points of the polyline can be adjusted by dragging the yellow squares.



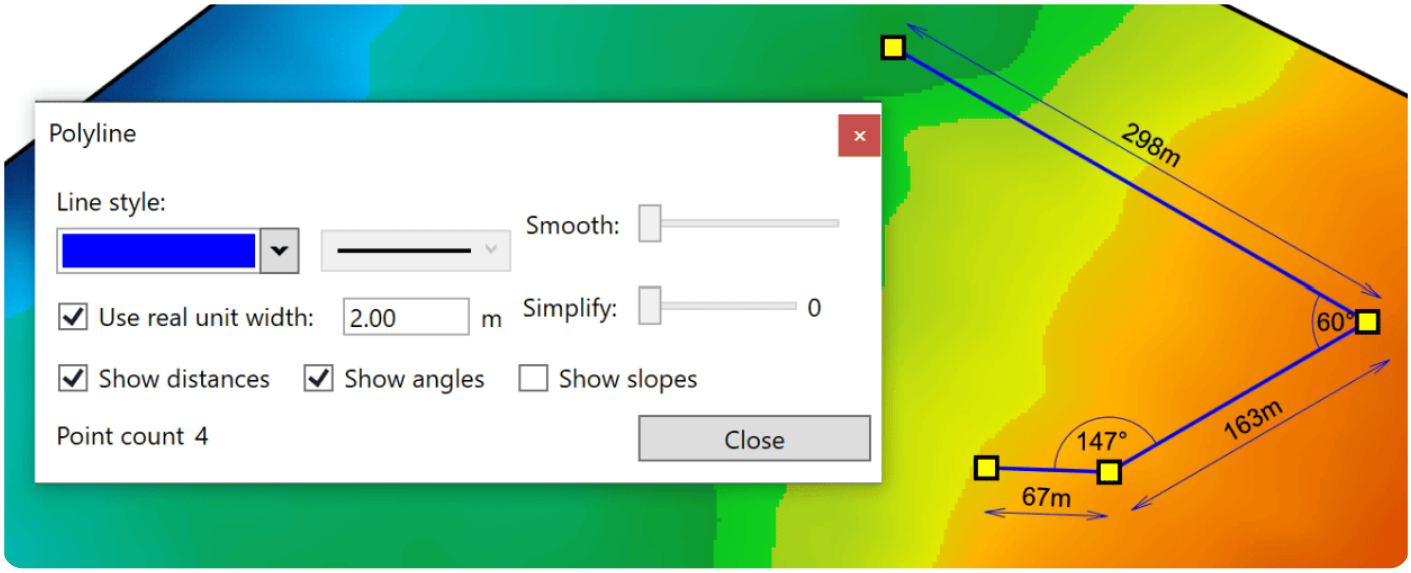
- ‘Line style’. The left drop down menu lets you set the line color, while the right drop down menu lets you set line thickness.
- ‘Smooth’ will take the points that are available and adjust them to a more direct path with fewer corners. When the slider is all the way to the right, the points of the measurement guide will be lined up in a straight line.
- ‘Simplify’ will remove points along the polyline while attempting to follow the original path as closely as possible. This is most visible when the slider is used on polylines that make small direction adjustments.
- ‘Use real unit width’ when selected will disable the right drop down menu of ‘Line style’ and set the width to the value on the right of the checkbox. When using this option, the line thickness is no longer linked to pixels and will

increase in size as the zoom level increases.

- ‘Show distances’ will display the length of each segment of the polyline.
- ‘Show angles’ will display the inside angles of each joint between segments.
- ‘Show slopes’ will display the overall grade of each segment as a percentage.

Polygon measurement

The ‘Polygon measurement’ tool measures the length of the sides as well as total space covered inside a chosen shape. When selecting the tool, the cursor will change into a cross. Clicking on the working area will place a point – continue clicking where you would like points to be placed, and double click on the final point to finish placement. The yellow squares can then be dragged around to adjust the shape.

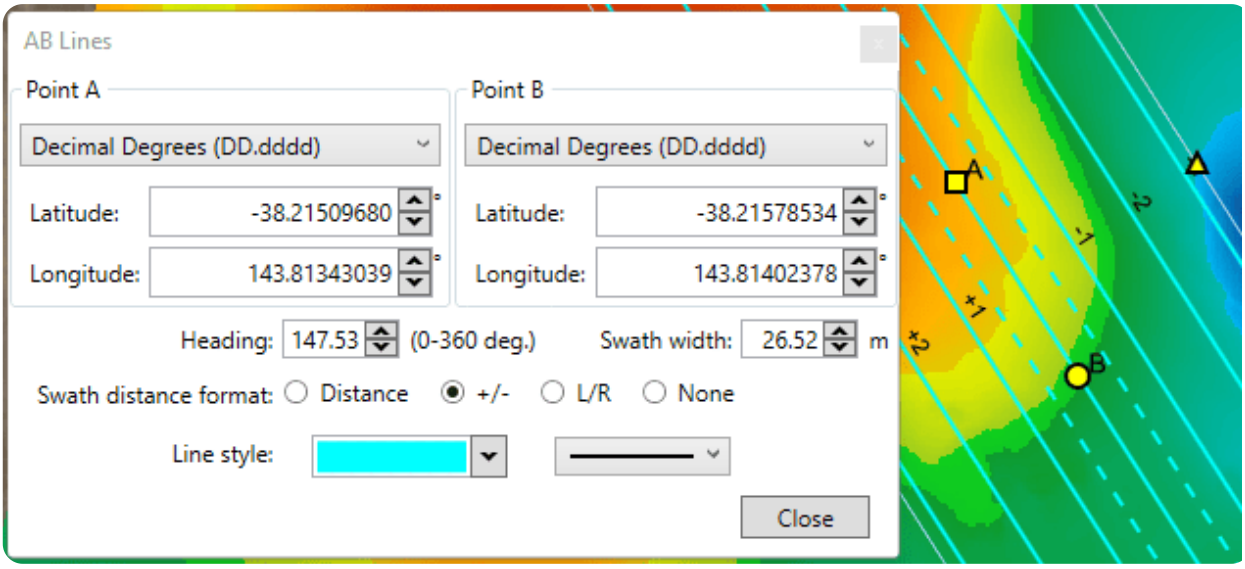


- ‘Line style’. The left drop down menu lets you select the color of the guidelines. The right drop down menu allows you to change the thickness of the guidelines.
- ‘Fill style’. The left drop down menu allows you to set the color of the shape’s fill. The right drop down menu provides 3 options as to how the closed shape will be filled: a solid color, a hatched pattern, or a dotted pattern.
- ‘Show distances’. Sets whether the distance of each segment is displayed. There are two options to the right to control where they are displayed.
- ‘Show angles’ will toggle on and off the display of angles between each segment of the polygon guide.
- ‘Show area’. This option toggles on and off the value shown at the center of the polygon.

- ‘Text size’ controls the text size of the total area covered − it does not affect the text size of the distances and angles.

AB lines

The ‘AB lines’ tool creates a pattern of guides along the working area. When using the tool, the cursor will change into a cross. Click on two points in the working area to create an AB line.

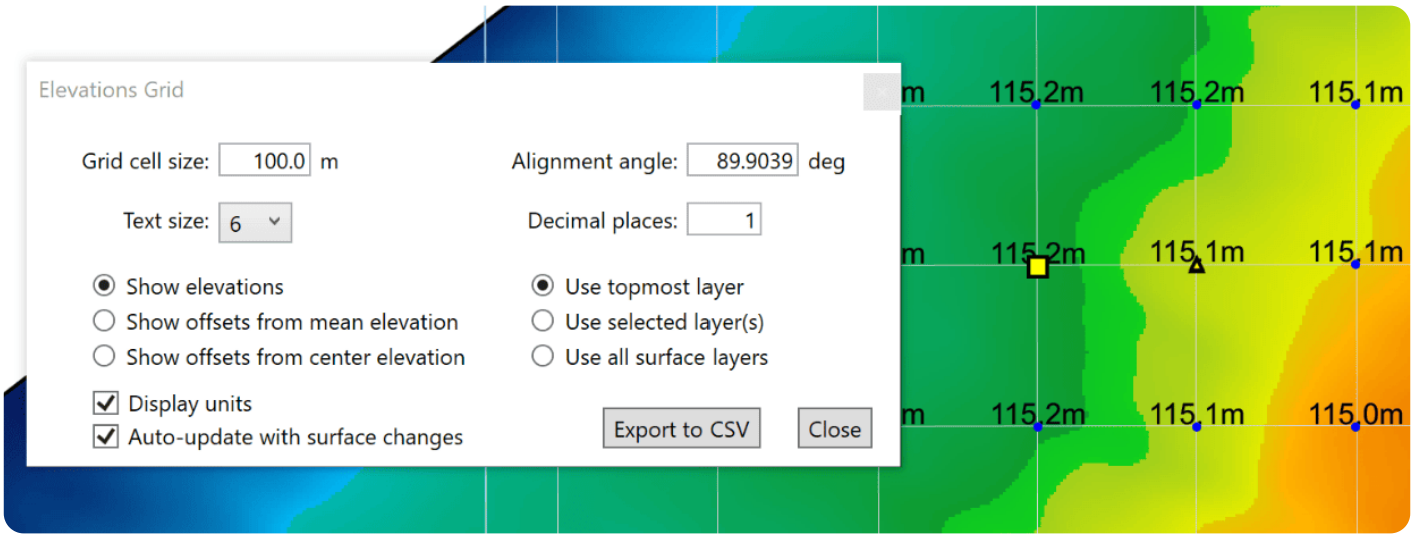


- ‘Heading’. The value in the heading setting controls the direction of the guidelines. The value displayed is the heading in degrees of Point B from Point A.
- ‘Swath width’ controls how far apart the lines are. The two dotted lines (on either side of the central line) show the reach of the implement (its swath width) as it travels down the first/central AB line. Thes can be used to position the first line relative to a boundary, or other feature.
- ‘Swath distance format’. This setting changes how the line labels are displayed.
  - ‘Distance’- will label each line as how many meters it is from the center line.
  - ‘+/-’ - will label each line as a number and whether it is positive or negative.
  - ‘L/R’ - will label each line a number and either L or R depending on which side of the center line it is.

    - ‘None’ will remove all labels from the AB lines.
- ‘Line style’. The left drop down menu will let you set the color of the guidelines, while the right drop down menu will let you set the thickness of the guidelines.

Elevations Guide

The ‘Elevations guide’ imposes a grid design on a field in the working area and displays the elevation of points at each junction on the grid. When using this tool the cursor will become a crossClicking on the working area in the desired center point will create a grid. The grid size and position can be manipulated by using the yellow anchors.

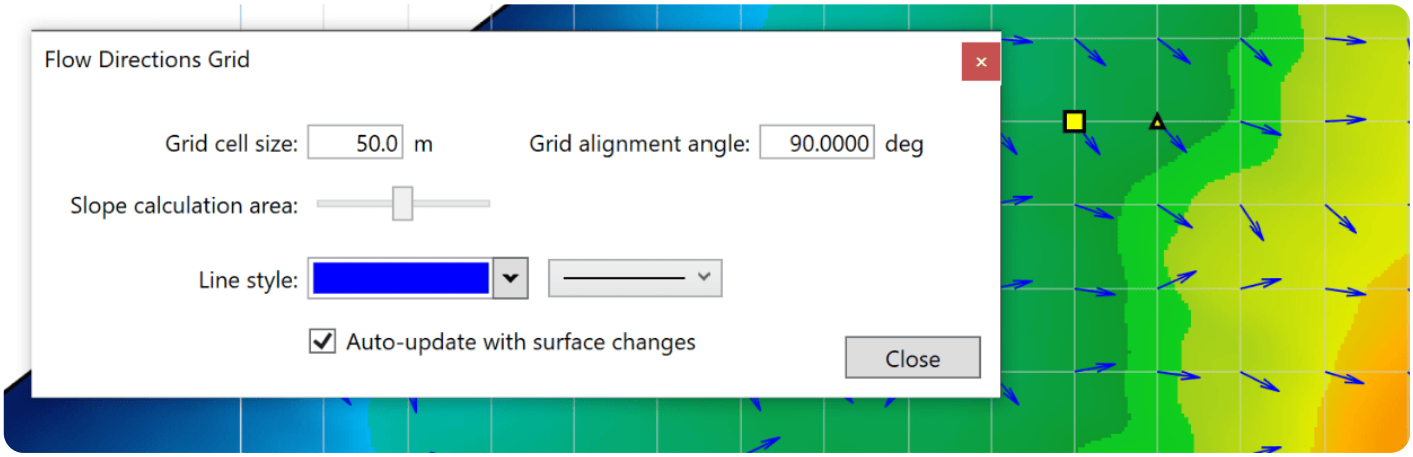


- ‘Grid cell size’. This option controls the size of the grid. Setting the size to 100m will result in each junction being 100 meters away from its neighbors.
- ‘Alignment angle’ is a method of rotating the grid.
- ‘Text size’. This option is a drop down menu that allows you to change the text size of the values on the grid.
- ‘Decimal places’. Sets how many decimal places will be visible on the grid values.
- ‘Show elevation’, ‘Show offsets from mean elevation’, and ‘Show offsets from center elevation’. These options will adjust what data is present on the grid.
- ‘Use topmost layer’, ‘Use selected layer(s)’, and ‘Use all surface layers’ control which surface layer is used to calculate the elevation points on the grid.
- ‘Display units’. By selecting this checkbox, the measurement units (meters, feet) will be shown on each value on the grid.

- ‘Auto-update surface changes’. By selecting this checkbox the grid will automatically update the displayed values when surface layers are changed.
- The grid is able to be exported into a CSV format by pressing the ‘Export to CSV’ button in the bottom right of the pop-up window.

Flow direction guide

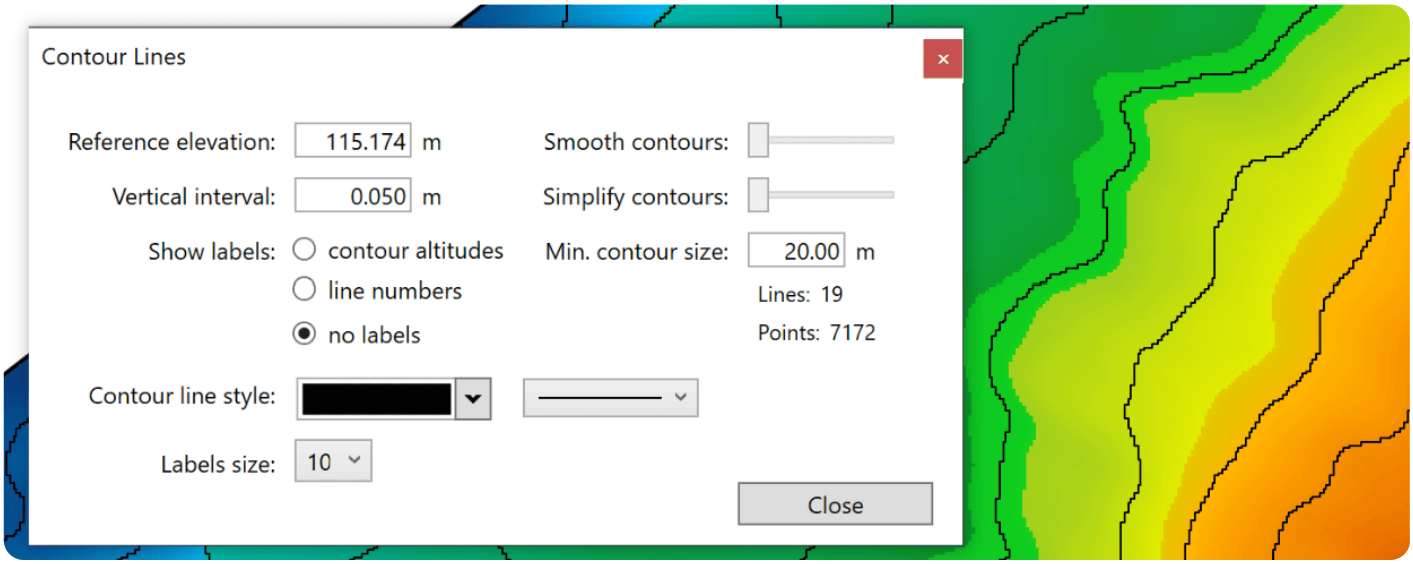
The ‘Flow direction’ guides creates a grid on the field with arrows at each junction that point in the direction that water is expected to flow. When the tool is selected the cursor will change into a cross, and left-clicking in the working area will create a grid centered where you clicked.



- ‘Grid cell size’. Adjusting this value will make the individual squares of the grid larger or smaller.
- ‘Grid alignment angle’. This option allows you to change the direction of the grid.The direction is set as the position of the yellow circle in relation to the yellow square.
- ‘Slope calculation area’. The further to the right that the slider is, the larger the area that T3RRA Design Plus takes as a sample to find the water flow direction.
- ‘Line style’. The left drop down allows you to change the color of the arrows on the field. The drop down menu on the right allows you to adjust the thickness of the arrows.
- ‘Auto-update with surface changes’. When this option is selected, the grid will automatically update when the surface layer changes.

Contour lines

The ‘Contour lines’ tool allows for the automatic creation of contour lines on the selected field. When the tool is selected, the cursor will change into a cross. Left-clicking on the desired field will generate contour lines and open a pop-up window that allows you to make changes to the contour lines.

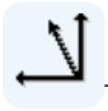


- ‘Reference elevation’ allows you to change the starting elevation that contours fan out from.
- ‘Vertical interval’ is used to change the elevation change between contour lines.
- ‘Smooth contours’. This slider will smooth out sharp turns in the lines. The further to the right the slider is, the more smoothed the contour lines will be.
- ‘Simplify contours’. This slider adjusts how complex the lines are. The further to the right the slider is, the straighter the lines will become.
- ‘Show labels’. On the left is a set of 3 choices: ‘contour altitudes’, ‘line numbers’, and ‘no labels’. These options control the display of information on each contour line. ‘Contour altitudes’ will display the elevation of each contour line. The second choice, ‘line numbers’, will display the number of each line, starting from the reference line. The final choice is ‘no labels’, this choice will

leave the lines unlabeled.

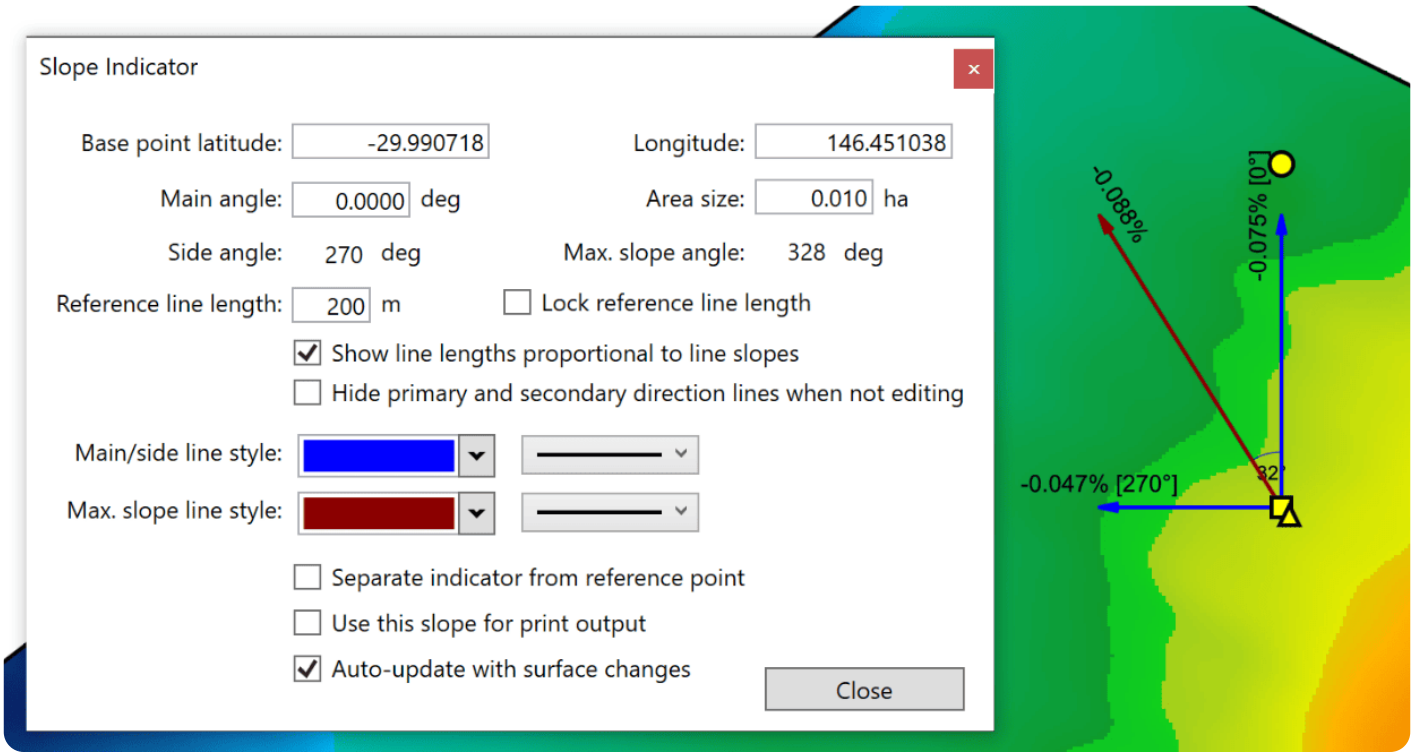
- ‘Min. contour size’ is the minimum length of contour lines placed on the field.
- The ‘Contour line size’ options are a set of drop down menus. The left menu lets you select the color of the contour line, and the right menu lets you choose line thickness.
- ‘Label size’ will adjust the size of text along the contour lines.

Slope Indicator



The ‘Slope Indicator’ tool is used to measure the slope of a particular area.

When the tool is selected the cursor will change into a cross. Once a point has been selected, slope indicators will appear on the field and a pop-up window will be opened. The slope indicators can be manipulated on the field by using the yellow anchor points.



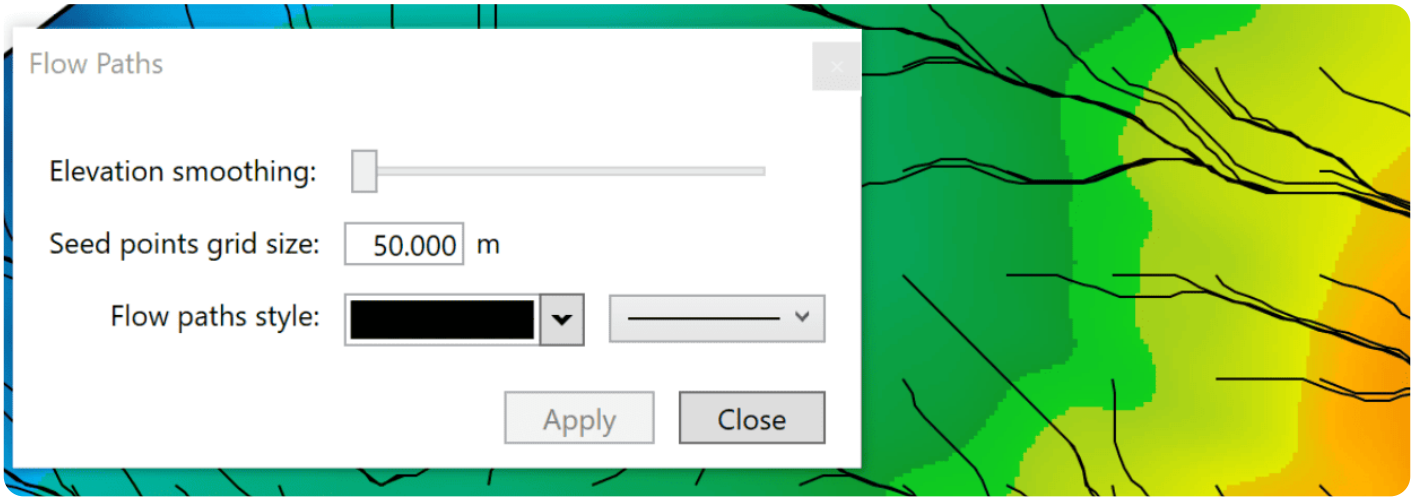
- ‘Base point latitude’ and ‘Longitude’. These options control the position of the indicator on the field. They can be manually changed by typing new values in the boxes. These changes take immediate effect.
- ‘Main angle’ This option controls the direction of the main direction line. The line changes size proportionally to the slope of the area. Until the settings have been finalized, the direction of the main line can be modified with the yellow circle anchor.
- ‘Area size’. This option controls the sample area of the slope indicator. The elevations within the sample area are read to determine the displayed slope. Increasing the value displayed in the box reads more elevations and provides a

more averaged slope measurement. Decreasing the area size gives a more specific and local slope measurement.

- ‘Side angle’ and ‘Max. slope angle’ cannot be changed directly - they display the secondary heading and the heading of the maximum slope at the selected location.
- ‘Reference line length’ allows you to change the maximum length of the slope indicators.
- ‘Lock reference line length’. When selected, this locks the reference line to its current length while dragging the yellow circle.
- ‘Show line lengths proportional to line slopes’. When selected, the lines will adjust in length to match the slope of the selected area. They will not exceed the reference line length.
- ‘Hide primary and secondary direction lines when not editing’, selecting this option will hide the main direction line and the secondary direction line once all settings have been finalized and the window has been closed.
- ‘Main/side line style’ the left drop down menu lets you select the color of the two slope lines at 90° to each other. The right drop down menu lets you select their thickness.
- ‘Max. slope line style’ the left drop down menu allows you to change the color of the maximum slope line. The right drop down menu allows you to change the thickness of the slope line.
- ‘Separate indicator from reference point’. This option allows you to move the indicator to another location while still using the same reference point. Once settings have been finalized the reference point and area will be invisible.
- ‘Use this slope for print output’. This option selects this slope for printing output.
- ‘Auto-update with the surface changes’. This check box will cause the slope indicator to adjust the displayed values depending on the top most layer in the surface selection.

Create flow paths

The ‘Create flow paths’ tool is used to create a display of the likely water paths present in a field. When the tool is selected, the cursor will change into a cross. Left click on a field to display the flow paths. Once a field has been selected, it will be populated with flow lines and a pop-up window will be opened.



- ‘Elevation smoothing’. This option is a slider that controls the smoothing of the elevation before creating the flow lines. The further to the right that the slider is, the more imperfections are taken out of the flow paths, creating straighter paths.

- ‘Seed points grid size’ controls the size of the grid that is used to take samples for flow paths. Setting a higher value here makes a larger grid and hence takes fewer samples.

- ‘Flow path style’ is a set of 2 drop down menus. The left drop down menu sets the color of the flow paths, by default this is set to black. The right drop down menu sets the thickness of the flow paths, by default this is set to the thinnest option.

In order for any changes made in the window to be reflected in the field you need to press the ‘Apply’ button at the bottom of the window. Once all desired changes have been made press the ‘Close’ button on the window to save all changes.